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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

REARDEN LLC, REARDEN MOVA LLC,  
California limited liability companies,

No. 3:17-cv-04006-JST

**FIRST AMENDED COMPLAINT  
FOR COPYRIGHT, PATENT, AND  
TRADEMARK INFRINGEMENT**

Plaintiffs,

Plaintiffs,

V.

THE WALT DISNEY COMPANY, a Delaware corporation, WALT DISNEY MOTION PICTURES GROUP, INC., a California corporation, BUENA VISTA HOME ENTERTAINMENT, INC. a California corporation, MARVEL STUDIOS, LLC, a Delaware limited liability company, MANDEVILLE FILMS, INC., a California corporation,

## **DEMAND FOR JURY TRIAL**

## Defendants.

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1 Plaintiffs Rearden LLC and Rearden Mova LLC (collectively “Plaintiffs”), through their  
 2 attorneys and for their claims against defendants The Walt Disney Company, Walt Disney Motion  
 3 Pictures Group, Inc., Buena Vista Home Entertainment, Inc., Marvel Studios, LLC (collectively  
 4 “Disney”), and Mandeville Films, Inc. (collectively “Defendants”), allege as follows.

5 **I. INTRODUCTION**

6 “There have been a lot of great CG [computer graphics] performances,  
 7 but [the Beast] was a romantic hero, someone who was at the  
 8 emotional center of the movie. I always said that we could get  
 9 everything else in this movie right, but if we didn’t get a Beast that  
 10 people believed in then [the movie] wouldn’t work.”<sup>1</sup>

11 – Bill Condon, Director, *Beauty and the Beast*

12 1. Disney’s *Beauty and the Beast* opened on March 17, 2017 to an astonishing \$170  
 13 million in North America and \$350 million globally, establishing numerous box-office records. It  
 14 became the top film opening of all time for a PG-rated film, both domestically *and* internationally. It  
 15 was the seventh largest opening for a film of any rating in North America. And it is now the highest  
 16 grossing PG-rated film of all time, earning over \$500 million domestically and \$1.25 billion  
 17 worldwide. *Beauty and the Beast* is the tenth highest grossing movie of any rating of all time.<sup>2</sup>

18 2. The film’s romantic hero, the Beast, was a CG (computer graphics) character played  
 19 by actor Dan Stevens, with every human subtlety of his facial performance carried through to the  
 20 animal-like CG face of the Beast by an innovative Oscar-winning visual effects (“VFX”) technology  
 21 called Contour Reality Capture, but generally referred-to by defendants as “MOVA.” Stevens  
 22 described how Contour was used:

23 The facial capture [for the Beast] was done separately using a  
 24 technology called “MOVA.” So, every ten days, two weeks, I’d go into  
 25 a booth and spray my face with UV paint and 27 little cameras would  
 26 capture the facial expressions of all the scenes we had done on  
 27 previous days...they would take that information and morph it onto the  
 28 Beast, his face...

29 And co-star Emma Watson (Belle) lauded Contour, saying:

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30 <sup>1</sup> Truitt, Brian, “Watch the crazy way ‘Beauty and the Beast’ turned Dan Stevens into a monster”,  
 31 USA Today, May 29, 2017. <https://www.usatoday.com/story/life/entertainthis/2017/05/29/exclusive-video-how-dan-stevens-was-transformed-in-beauty-and-the-beast/102281138/>.

32 <sup>2</sup> <http://www.boxofficemojo.com/movies/?id=beautyandthebeast2017.htm>.

1 I'm so pleased that we did it the way we did it because when you see  
 2 Beast on screen there is something so human about him... [Contour]  
 3 really captures the subtlety of Dan's facial expression and the  
 performance that he gives...I don't think the world has seen anything  
 like it before. I think it's really unique to our film.<sup>3</sup>

4 Director Bill Condon went further, expressly crediting the success of the CG Beast to the unique  
 5 capabilities of Contour and attributing the film's success in its entirety to it:

6 "[The Beast] was at the emotional center of the movie, who was the  
 7 romantic hero of the movie, who was going to be a CG character...and  
 8 it was this new process [Contour] which—you know usually its dots  
 like this [Condon points to his face] and then animators fill in the  
 dots—but actually captured every pore of Dan [Stevens]'s skin and  
 9 that's why so much of him, this great performance, comes through..."<sup>4</sup>

10 This view was affirmed by *Beauty and the Beast*'s editor, Virginia Katz:

11 "...the main concern, for me and I think for all [working on the  
 movie], was how that the Beast was going to be visualized. I mean, if  
 12 the Beast didn't work, then the film wouldn't work."<sup>5</sup>

13 3. But in all of the film industry and media accolades about the record-breaking success  
 14 of *Beauty and the Beast*, and the acclaimed cutting-edge digital Contour technology that made the  
 15 film's success possible, nowhere is it mentioned that the patented and copyright-protected Contour  
 16 technology was stolen from its inventor and developer, Rearden LLC, and its owner Rearden Mova  
 17 LLC. Nowhere is it mentioned that although Disney had previously contracted with Rearden LLC  
 18 and its controlled entities on *four previous major motion pictures* to use Contour, had entered  
 19 negotiation on multiple occasions with the thieves for "licensing or acquiring" the "MOVA" Contour  
 20 assets including "patents" and "software," and knew of a Rearden Demand Letter<sup>6</sup> to one of the  
 21 thieves warning that he was unlawfully in possession of Rearden's facial performance capture  
 22 intellectual property (which it knew included "patents" and "software"), Disney nonetheless

23  
 24 <sup>3</sup> Paris Press Conference, Feb 17, 2017.  
 25 [https://www.youtube.com/watch?v=R9mKV\\_gklgw&feature=youtu.be&t=12m14s](https://www.youtube.com/watch?v=R9mKV_gklgw&feature=youtu.be&t=12m14s) and  
<https://youtu.be/PDmNbXMTxd0?t=12m5s>.

26 <sup>4</sup> *Id.*

27 <sup>5</sup> Romanello, Linda, Post Magazine, March 1, 2017.  
<http://www.postmagazine.com/Publications/Post-Magazine/2017/March-1-2017/Cover-Story-Disney's-i-Beauty-and-the-Beast-I.aspx>.

28 <sup>6</sup> *Shenzhen, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt: 383, at 169.

1 contracted with the thieves to use the stolen Contour system. Nowhere is it mentioned that Disney  
 2 received numerous Contour capture videos bearing Rearden's copyright notice, but continued using  
 3 the copyrighted Contour software and *removed* Rearden's copyright notice when it used the capture  
 4 videos in promotional materials. And, nowhere is it mentioned that *after* Rearden and Rearden  
 5 Mova were in widely-reported litigation against the thieves over the Contour copyrighted software,  
 6 patents and MOVA and CONTOUR trademarks, Disney secretly used Contour in *Beauty and the*  
 7 *Beast* throughout the litigation, and then prior to the film's release, flaunted its unauthorized use of  
 8 Contour as a promotional vehicle for the film. Throughout this entire time, Disney never bothered to  
 9 contact its longtime Contour service provider Rearden LLC to ask any questions or to verify  
 10 Disney's authorization to use the Contour program, system, methods, trade secrets, or trademarks  
 11 that Disney knew Rearden owned.

12 4. And this was not the first time. Disney contracted with the same thieves previously  
 13 (after receiving the Rearden Demand Letter) to use Contour in another film, *Guardians of the*  
 14 *Galaxy*, which was also highly successful. Disney falsely designated the thieves as the owners of  
 15 Rearden Mova's Contour facial capture technologies, resulting in widespread industry confusion to  
 16 the point where Disney's unauthorized use of Contour in *Guardians of the Galaxy* was the *only*  
 17 movie cited by the Academy of Motion Picture Arts and Sciences when awarding "MOVA Facial  
 18 Performance Capture system"—confusing the name of the company (Rearden Mova) with the name  
 19 of the technology (Contour)—a Sci-Tech Oscar:

20 "MOVA uses phosphorescent makeup applied with a sponge, strobing  
 21 fluorescent lights, and an array of 32 cameras. Instead of capturing around  
 22 a hundred points on the face [using conventional marker-based facial  
 23 capture] MOVA creates an animated mesh with thousands of points. This  
 offers digital recreations with all the subtle and dynamic motions  
 performed by the actor. **You would have seen this most recently by Josh  
 Brolin playing Thanos in the blockbuster *Guardians of the Galaxy*.**"<sup>7</sup>

24  
 25  
 26  
 27 <sup>7</sup> <https://youtu.be/F90iv9I-Sr4> and <http://oscar.go.com/news/oscar-news/150209-ampas-sci-tech-awards-2015-winners> (emphasis added).  
 28

1 And Disney contracted with the same thieves again to use the Contour technology for the same  
2 Thanos character in a sequence in the closing credits of *Avengers: Age of Ultron* used by defendants  
3 Disney MPG and Marvel to promote the next *Avengers* film.

4 5. Disney used the stolen Contour systems and methods, induced, caused, and materially  
5 contributed to copying of the stolen Contour software, and caused confusion in its use of the MOVA  
6 mark in at least *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*, in  
7 knowing or willfully blind violation of Rearden's intellectual property rights. This case seeks all just  
8 and equitable copyright, patent, and trademark remedies on behalf of the authors, inventors, and  
9 owners of the Contour program, systems and methods: plaintiffs Rearden and Rearden Mova.

10 **II. THE PARTIES**

11 6. Plaintiff Rearden LLC ("Rearden") is a California limited liability company having its  
12 principal place of business at 355 Bryant Street, Suite 110, San Francisco, California 94107.

13 7. Plaintiff Rearden Mova LLC ("Rearden Mova") is a California limited liability  
14 company having its principal place of business at 355 Bryant Street, Suite 110, San Francisco,  
15 California 94107. Rearden Mova is wholly owned by Rearden.

16 8. Defendant The Walt Disney Company ("Disney Company") is a Delaware  
17 corporation having its principal place of business at 500 S. Buena Vista Street, Burbank, California  
18 91521.

19 9. Defendant Walt Disney Motion Pictures Group, Inc. ("Disney MPG") is a California  
20 corporation having its principal place of business at 500 S. Buena Vista Street, Burbank, California  
21 91521. Disney MPG is a wholly-owned subsidiary of defendant Disney Company.

22 10. Defendant Buena Vista Home Entertainment, Inc., d/b/a Walt Disney Studios  
23 Home Entertainment ("Buena Vista"), is a California corporation having its principal place of  
24 business at 500 S. Buena Vista Street, Burbank, California 91521. Buena Vista is a wholly-owned  
25 subsidiary of defendant Disney Company.

1           11.    Defendant Marvel Studios, LLC (“Marvel”) is a Delaware limited liability company  
2 having a principal place of business at 500 S. Buena Vista Street, Burbank, California, 91521.  
3 Marvel is a division of Disney MPG.

4           12.    Defendant Mandeville Films, Inc. (“Mandeville”) is a California corporation having  
5 its principal place of business at 3000 West Olympic Boulevard., Building 5, Santa Monica,  
6 California 90404.

### 7                   **III. JURISDICTION AND VENUE**

8           13.    This Court has subject matter jurisdiction under 28 U.S.C. § 1331 (federal question  
9 jurisdiction), and § 1338 (patent, trademark and copyright jurisdiction).

10          14.    This Court has personal jurisdiction over all defendants. It has general personal  
11 jurisdiction over Disney MPG, Buena Vista, and Mandeville because they are corporations organized  
12 and existing under the laws of the State of California. It has general personal jurisdiction over  
13 Disney Company and Marvel because their principal places of business are in the State of California  
14 and they have the capacity to sue and be sued in the State of California. And this Court has specific  
15 personal jurisdiction over all defendants because they have committed acts in the State of California  
16 that give rise to all acts of infringement asserted herein.

17          15.    Venue is proper for plaintiffs’ copyright and trademark infringement claims under 28  
18 U.S.C. § 1400(a) and 1391 (b), (c) and (d). Disney MPG and Buena Vista reproduced, distributed,  
19 and authorized the performance and display of *Guardians of the Galaxy*, *Avengers: Age of Ultron*,  
20 and *Beauty and the Beast* throughout this judicial district. All other defendants are residents of the  
21 State of California and subject to personal jurisdiction in this judicial district.

22          16.    Venue is proper for plaintiffs’ patent infringement claims against defendant Disney  
23 MPG under 28 U.S.C. §§ 1400(b) because defendant Disney MPG is a California corporation, and  
24 has sufficient minimum contacts to be subject to personal jurisdiction in this judicial district if this  
25 judicial district were a separate state.

#### IV. FACTUAL ALLEGATIONS

## A. The Contour program, systems, and methods

17. The technology at the core of this case includes Contour Reality Capture (“Contour”) technology that was conceived, developed, and authored by plaintiff Rearden and is currently owned by plaintiff Rearden Mova.

18. Contour (<http://www.rearden.com/mova.html>) is one of many technologies incubated and offered by Rearden ([www.rearden.com](http://www.rearden.com)), a San Francisco Bay Area company founded in 1999 by Steve Perlman as an incubator for fundamental technology, creative works, and their interplay.

19. Contour is the fourth performance motion capture technology that Rearden has used in film and videogame production since its founding 19 years ago. Facial performance motion capture, as both a technology and a tool for motion picture and videogame production, falls squarely within the focus of Rearden's business. Rearden practices all of its technologies and inventions, either directly or indirectly by spinning off Rearden entities to use its technologies and inventions. Despite holding a global portfolio of hundreds of its own patents, Rearden has never been in the business of licensing third parties to practice its technologies and inventions, and it has never licensed nor sought to license any of its technologies, inventions, patents, copyrights, or trademarks. Rearden's intellectual property portfolio exists only to protect Rearden's product and services offerings, and neither Rearden nor any of its controlled entities has ever previously sued any other person or entity for patent or copyright infringement.

20. Mr. Perlman previously worked as Principal Scientist at Apple where he developed, among many other technologies, the multimedia underpinnings of the color Macintosh as well as QuickTime. He left Apple for two startups that later went public, and designed and co-founded WebTV, which was later acquired by Microsoft. Microsoft named Perlman President of a new Silicon Valley division focused on television products, which ultimately developed Microsoft's cable, satellite, IPTV and Xbox 360 systems. Perlman left Microsoft in 1999 and self-funded a technology incubator and visual effects production studio in San Francisco called Rearden, Inc. (now Rearden LLC). Rearden focused largely on developing fundamental media-related technologies

1 whose development times (e.g. 5 to 15 years) are beyond the horizon of venture capital and corporate  
 2 research and development. Perlman has operated Rearden continuously through to this day. He is a  
 3 prolific inventor. Perlman is a named inventor on over 500 patents worldwide, and among his many  
 4 innovations are the following:

- 5     ▪ The underlying technology for QuickTime (the video streaming  
       technology for iPhone, iPad, iPod and Mac and much of the  
       multimedia technology for Apple);
- 6     ▪ The underlying technology for many of Microsoft's video  
       products;
- 7     ▪ OnLive cloud gaming technology;
- 8     ▪ Contour facial capture technology;
- 9     ▪ Artemis pCell wireless technology; and
- 10    ▪ A wide range of other technologies in other fields, including  
       medical and national defense life-saving technologies, often in  
       cooperation with the U.S. government and U.S. agencies,  
       sometimes not publicly disclosed.

14           21. A major technology focus of Rearden from its 1999 founding to this day is  
 15        “performance motion capture,” a production technology typically used to create a 3D animated  
 16        character in a movie or a videogame that moves exactly like a human performer. In 2000, Rearden  
 17        began offering motion capture services for movies and videogames (through wholly-owned  
 18        subsidiaries Rearden Studios and then MOVA LLC) using existing commercial “marker-based”  
 19        motion capture systems that could capture and track body (“skeletal”) motion, but there was no  
 20        known technology at that time that could capture and track the subtleties of human facial motion in a  
 21        realistic, life-like manner, despite an urgent need:

22           “The state of the art [before Contour] was ... marker-based motion  
 23        capture...we looked at a number of other films at the time that were  
 24        using facial marker tracking...as you can see, it gives you a pretty  
 25        crappy performance... What we realized was that what we needed was  
       the information that was going on between the markers. We needed the  
       subtleties of the skin. We needed to see skin moving over muscle  
       moving over bone. We needed creases and dimples and wrinkles...”<sup>8</sup>

27           

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 28           <sup>8</sup> Ulbrich, Ed (former Digital Domain CEO), “How Benjamin Button Got His Face” TED Talk,  
       Feb 2009. [https://www.ted.com/talks/ed\\_ulbrich\\_shows\\_how\\_benjamin\\_button\\_got\\_his\\_face](https://www.ted.com/talks/ed_ulbrich_shows_how_benjamin_button_got_his_face).

1 Rearden set out to invent and perfect a photorealistic facial motion capture and tracking system.

2 22. Over the next five years, Rearden's technical team—including brilliant, talented, and  
 3 highly creative engineers, programmers, and visual effects artists—tried dozens of different  
 4 approaches to solve the problem. Years of experimenting, testing, trials, failures, sweat of the brow,  
 5 expenditure of millions of dollars, and finally stunning breakthroughs, ultimately led to the  
 6 conception and perfection of a solution to the long-felt need—a technology that precisely captures  
 7 and tracks the 3D shape and motion of a human face to sub-millimeter precision, producing  
 8 photorealistic results. Rearden branded the technology Contour Reality Capture, and offered it to the  
 9 videogame and motion picture industries. The solution was comprised of a complex apparatus and  
 10 methods for capturing facial performances, and wholly original software that operated the apparatus  
 11 and subsequently processed the performance captures into works that could be used by effects  
 12 studios to animate CG characters. This innovative technology was recognized in the motion picture  
 13 industry as revolutionary:

14 “Contour’s promise is enormous,” [Director David] Fincher said, “The  
 15 notion that the human face in all its subtleties could be mapped in real  
 16 time and such density of surface information opens up so many  
 17 possibilities for both two- and three-dimensional image makers and  
 18 story-tellers.”

19 “I live in this environment, and I see stuff every day, so I get a little  
 20 jaded,” said [then Digital Domain Senior VP and Executive Producer  
 21 Ed] Ulbrich... “Other developments have been gradual, more  
 22 evolutionary than revolutionary. Contour separates the performance  
 23 from the photography. It’s a substantial turning point in the business,  
 24 and I think it will change how pictures are made.”<sup>9</sup>

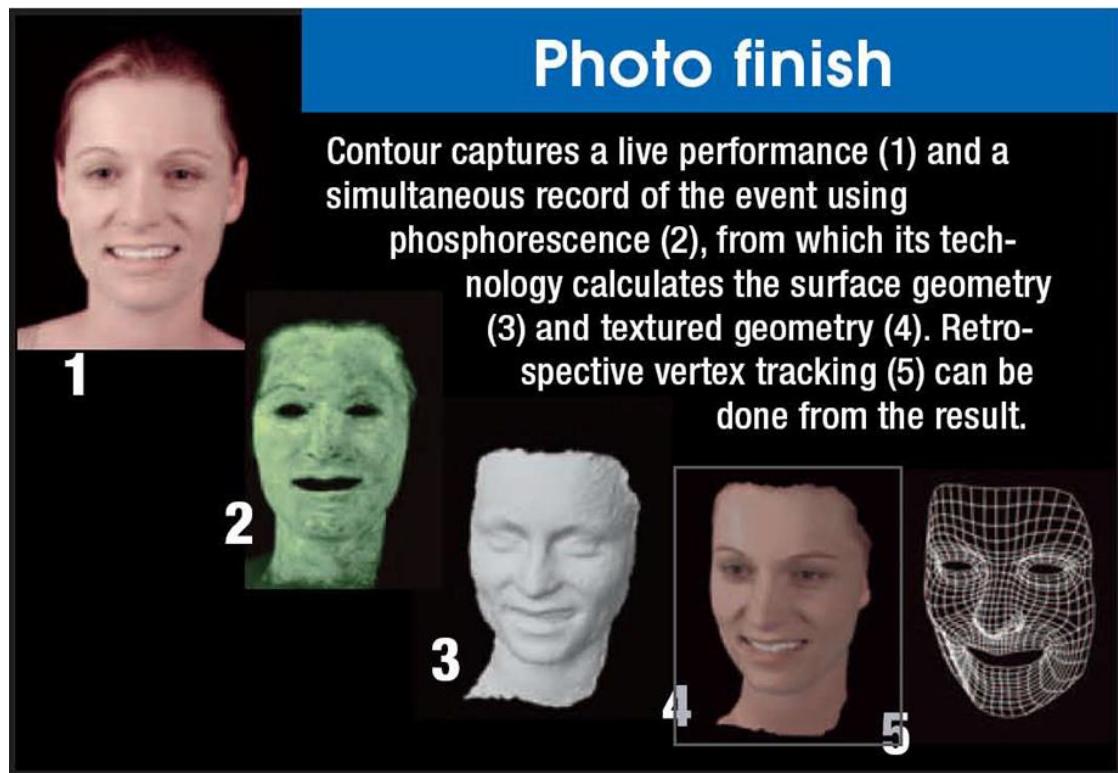
25 23. Contour’s technical breakthrough was introduced at the Special Interest Group on  
 26 Computer Graphics and Interactive Techniques (“SIGGRAPH”) Conference on July 31, 2006 to  
 27 wide acclaim, including photographs of Contour’s systems and methods on the front page of the *New*  
 28

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27 <sup>9</sup> Marlowe, Chris, “Contour mapping intricate detail: Mova revolutionizing motion-capture  
 28 process with new system,” The Hollywood Reporter, July 31, 2006,  
<http://www.rearden.com/press/2006/Contour-HollywoodReporter-060731-2.pdf>.

1 *York Times*<sup>10</sup>, page B1 of the *Wall Street Journal*<sup>11</sup>, and *The Hollywood Reporter*, among other  
 2 publications. Mr. Perlman was invited to present MOVA Contour technologies and their practical  
 3 applications in movie production to the Directors Guild of America<sup>12</sup>. And he was invited on many  
 4 occasions to give public presentations on MOVA Contour and the development process that led to its  
 5 invention, for example in a speech at Columbia University<sup>13</sup>.

6 24. The following photograph<sup>14</sup> from an article in *The Hollywood Reporter* on the day  
 7 Contour was unveiled—July 31, 2006—was directed to movie and videogame industry professionals  
 8 and illustrates several Contour program output works, which are described in further detail later in  
 9 subsequent allegations:



23 <sup>10</sup> Markoff, John, “Camera System Creates Sophisticated 3-D Effects”, New York Times, July  
 31, 2006. <https://nyti.ms/2uAfwGF>.

24 <sup>11</sup> Wingfield, Nick, “Digital Replicas May Change Face of Films”, July 31, 2006.  
<http://on.wsj.com/2teIRbO>.

25 <sup>12</sup> “Facial Performance Capture for Photoreal Digital Characters’ Presented by Steve Perlman,  
 Founder & President, Mova”, Digital Day 2007: The Future of the Future, Directors Guild of  
 America, July 28, 2007. [http://ishindler.com/articles/DGA\\_Digital\\_Day\\_flyer07.pdf](http://ishindler.com/articles/DGA_Digital_Day_flyer07.pdf).

26 <sup>13</sup> <https://youtu.be/1QxrQnJCXKo>.

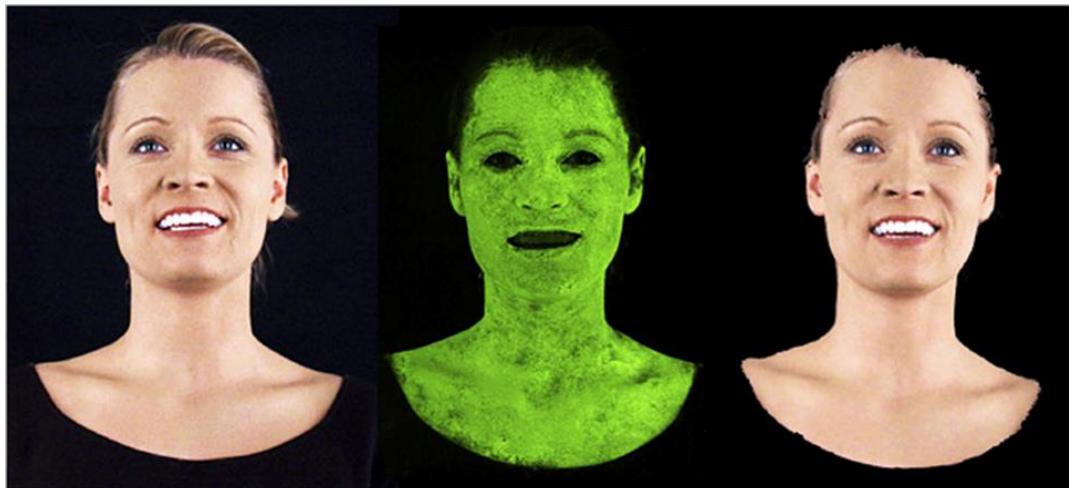
27 <sup>14</sup> Marlowe, *op. cit.*

1  
2 25. Also on July 31, 2006, the following photographs appeared in a *New York Times*  
3 article directed to a general readership audience, which illustrate an application of the phosphor-  
4 based makeup used in Contour facial motion capture methods:



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12  
13 Actors must cover themselves with makeup containing phosphorescent powder for Contour, a  
14 system that can create 3-D effects. Austin Hice

15 and three Contour program output works (this photograph appeared on the front page):<sup>15</sup>

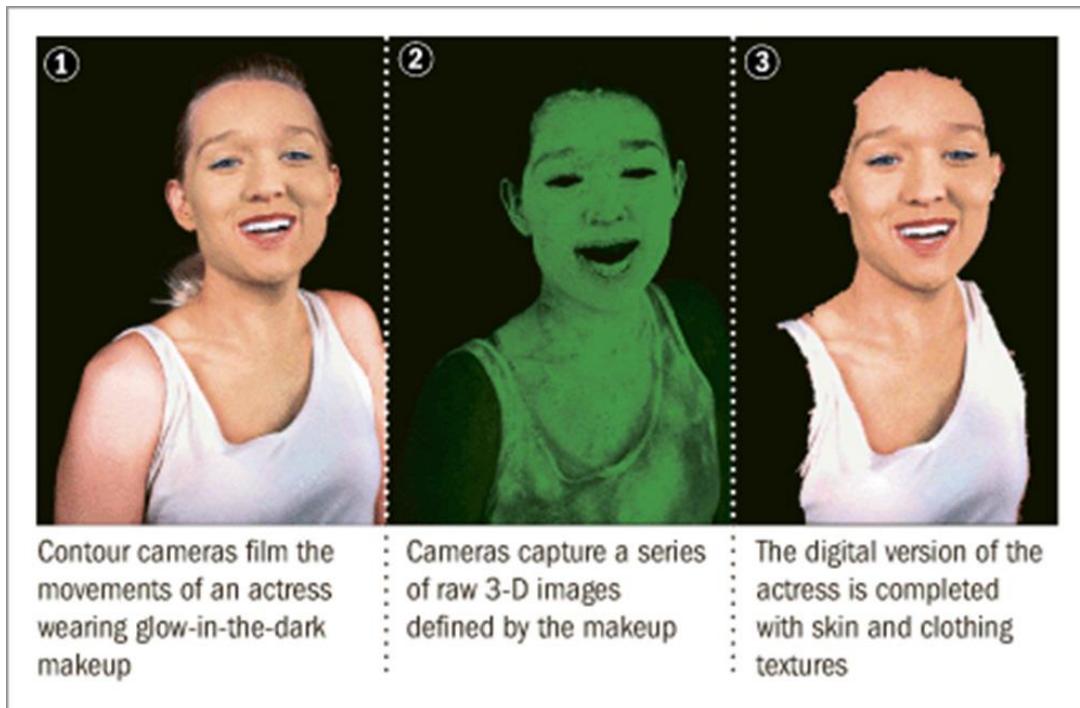


16  
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21  
22  
23 An actress goes from live performance, left, to phosphorescence, to a Contour-generated image, right. Mova.com

24  
25 26. Also on July 31, 2006, the following photograph appeared in a *Wall Street Journal*  
26 article directed to a general readership audience, which illustrates the same three Contour program

27  
28 <sup>15</sup> Markoff, *op. cit.*

1 output works with “non-technical reader” annotations for each image (the web version of the article  
 2 included a video that showed the three output works in motion):<sup>16</sup>



27. In one embodiment, Contour uses an array of cameras whose shutters are synchronized to strobing white lights and ultraviolet lights in conjunction with phosphor-based makeup applied to the performer in random patterns, with the entire system controlled by highly-advanced, original, and proprietary Contour program that operates the Contour system in real time to capture an actor's performance frame-by-frame, and then processes the capture into original Contour program output works based on the captures.

28. The Contour system is controlled, and the captured camera images are processed, by several computers running the Contour program. Part of the program operates prior to a facial performance capture session to prepare and calibrate the Contour system. Part operates in real-time during a live facial performance capture. And part operates after the facial capture to process the captures into works that can be used to animate CG characters. The Contour program produces

<sup>16</sup> Wingfield, *op. cit.*

1 several types of output works, some of which are used by the Contour program itself for further  
 2 processing, and some are used for animating a CG face in a movie or videogame.

3 29. One embodiment of the operation of the Contour program, system, and methods is  
 4 described in the following page from a Contour brochure below, distributed at computer graphics  
 5 and entertainment industry conferences:

6

7 **HOW IT WORKS**

8

9 **PREPARATION**

10 

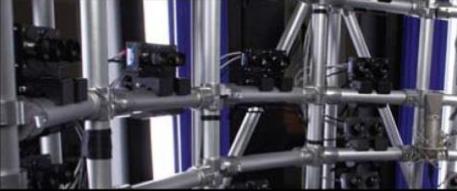
11 Preparation is completed in under an hour. The actor's skin is  
 12 sponged with an FDA-approved phosphorescent makeup, either  
 13 alone or mixed with skin-tone base color. Cloth can also be  
 14 treated with a phosphorescent dye.

15 **LIGHTS**

16 

17 The Contour capture system is portable, and can be set up on  
 18 any light-sealed stage. The stage is then lit with custom Kino Flo  
 19 fluorescent fixtures. Because the lights are flashed on and off at  
 20 90 to 120 frames per second (i.e. beyond human perception), the  
 21 stage appears steadily lit to the eye.

22 **CAMERAS**

23 

24 Two sets of cameras are placed around the stage area:  
 25 Color cameras capture normally-lit surfaces only when the lights  
 26 are on. This provides the reference video used for previews.  
 27 Geometry cameras capture phosphorescent patterns (embedded  
 28 in the makeup or cloth dye) only when the lights are off.

9 **ACTION**

10 

11 **Live Performance:** Contour enables true  
 12 "digital directing." Subjects are able to  
 13 move freely within the capture volume.  
 14 Color cameras capture normally-lit  
 15 surfaces, providing reference video from  
 16 three or more cameras.

17 

18 **Capture Process:** Our cameras  
 19 capture every surface detail where  
 20 phosphorescent makeup is applied. It's  
 21 like having millions of invisible markers.  
 22 Wrinkles, dimples, lips, nostrils—every  
 23 subtle detail is captured in motion.

24 

25 **Captured Surface:** The recorded  
 26 phosphorescent patterns are then  
 27 correlated to produce a high-resolution  
 28 surface geometry—100,000+ polygons  
 per scene.

9 **Tracked Surface:** Contour tracks your  
 10 optimal number of surface points from  
 11 frame to frame and shot to shot. Tracked  
 12 points are specified by the client after  
 13 the capture session and placed wherever  
 14 required. Tracked points can be added,  
 15 moved and retracked, utilizing the same  
 16 capture data.

17 **For more information, or to contact us,  
 18 visit [www.mova.com](http://www.mova.com). The MOVA studio  
 19 is located in San Francisco, CA.**

20 Copyright MOVA® LLC 2006–2008. MOVA  
 21 is a registered trademark and Contour is a  
 22 trademark of MOVA LLC. Patents Pending.

30. **Preparation:** Phosphor-based makeup (various types of phosphor are supported) is applied in a random pattern on the performer's face, neck, etc.—whatever body surfaces are intended to be captured—typically using an airbrush, sponge or cotton swab.

31. **Lights:** The performer sits or stands in the arc-shaped Contour apparatus in a light-sealed stage. One part of the Contour program causes white lights and ultraviolet lights to be flashed so rapidly that the flashing is beyond human perception and it appears to the performer and observers that the white and ultraviolet lights are on steadily.

32. **Cameras:** One part of the Contour program causes the shutters on two pluralities of cameras, distributed around the apparatus, to open and close synchronously with the flashing of the lights such that:

- (a) a first plurality of cameras open their shutters when the white lights are on, illuminating the natural skin color of the performer; and
- (b) a second plurality of cameras open their shutters when the white lights are off and the phosphor-based makeup is emitting random patterns of light.

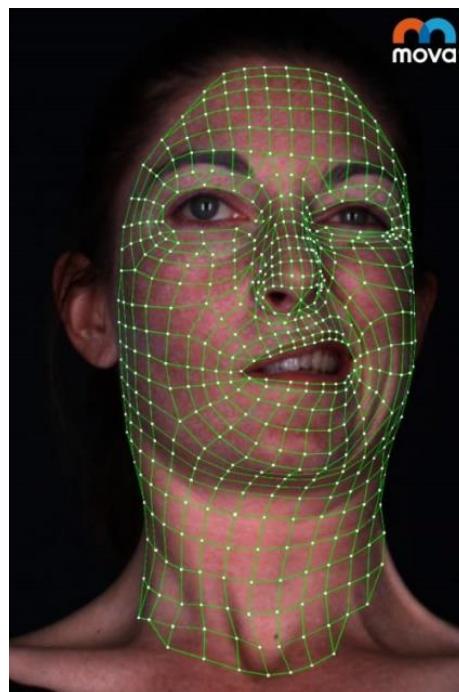
33. **Action:** The performer provides her or his facial performance while one part of the Contour program causes the output of each of the plurality of cameras to be recorded onto storage devices. The output works of the two pluralities of cameras are illustrated in each half of the face in the “Capture Process” section of the brochure reproduced above.

- (a) the output of the first plurality of cameras is called the “**Skin Texture**” and it looks like normal skin and facial features of the performer from multiple angles, largely without visible makeup, and
- (b) the output of the second plurality of cameras is called the “**Makeup Pattern**” and it looks like a random pattern of green or blue largely without showing the skin or other facial features (e.g. eyes or mouth) of the performer.

34. Part of the Contour program processes the Makeup Pattern output work to create a high-resolution 3D surface that moves in the shape of the skin of the performer with sub-millimeter

1 precision. This output work is called the “**Captured Surface**” and, rendered on a display, it looks  
2 like a 3D bust of the performer’s skin in motion. A still frame of a Captured Surface work is shown  
3 in the “Captured Surface” section of the brochure reproduced above.

4 35. The same part of the Contour program processes the Makeup Pattern output work to  
5 create a high-resolution 3D mesh that tracks points on the skin of the performer in 3D as the skin  
6 moves from frame-to-frame. This output work is called the “**Tracking Mesh**” and, rendered on a  
7 display, it looks like a 3D mesh that exactly follows the movement, stretching and wrinkling, etc., of  
8 the skin as the performer moves her or his face. A still frame of a Tracking Mesh work is shown in  
9 the “Tracked Surface” section of the brochure reproduced above. The Tracking Mesh work tracks the  
10 subtleties of the performer’s facial motion with sub-millimeter precision. For example, if the  
11 performer’s expression causes the cheeks to bulge out from a smile, the points on the 3D mesh  
12 tracking the cheek will bulge out in exactly the same 3D shape. If the forehead furrows into wrinkles,  
13 then the points on the 3D mesh tracking the forehead will furrow into wrinkles in exactly the same  
14 3D shape. The Tracking Mesh work can be configured to be at any resolution, whether thousands or  
15 even millions of points, depending on the level of tracking detail required by the project. An example  
16 of a Tracking Mesh work tracking skin deformation from an extreme expression is shown here:



1       36. The Contour program's output works specified above can be used for many different  
 2 applications. Often they are used for "retargeting" the performer's face onto another 3D model of a  
 3 face, either a real face (e.g. when Rupert Grint (Ron Weasley) transforms into the face of Daniel  
 4 Radcliffe (Harry Potter) in *Harry Potter and the Deathly Hallows, Part I*, or a fictional face (e.g.  
 5 Mark Ruffalo's face transforms into the Hulk's face in *The Avengers*, Brad Pitt's 44-year-old face  
 6 retargeted to an 87 year-old version of his face in *The Curious Case of Benjamin Button*, or Jeff  
 7 Bridge's face retargeted in *TRON: Legacy* (2010) to his 28 year-younger face as it appeared in *TRON*  
 8 (1982).

9       37. When the retargeting is from a first performer's real face to the real face of a second  
 10 performer, then each performer's face is captured by the Contour system, with output works created  
 11 by the Contour program for each performer. The Captured Surface, Tracking Mesh, Makeup Pattern,  
 12 and Skin Texture output works can be used in the construction of a 3D model of the face of the  
 13 second performer, and then the Tracking Mesh work of the first performer is used to animate the 3D  
 14 model of the second performer's face. The result is a 3D model of the face of the second performer  
 15 that is animated by the motion of the first performer's face. For example, the photograph below  
 16 shows a man (the "second performer") captured by the Contour program, system, and methods. The  
 17 3D model of a CG head (center) was generated from the Contour program output works, including  
 18 the Makeup Pattern (left) and Tracking Mesh (right) works:



1       38. The photograph below shows the performance of the woman (the “first performer”) in  
 2 the brochure reproduced above (showing her Skin Texture (left) and Tracking Mesh (right) Contour  
 3 output) works retargeted to the man’s CG head in the above photo by retargeting the points on her  
 4 Tracking Mesh work to the 3D model of the man’s CG head. As you can see in her Live  
 5 Performance (showing the Skin Texture output work, below left), her facial expression causes the  
 6 man’s CG head to track her facial expression. Contour’s Tracking Mesh work is so precise that a  
 7 high degree of realism is maintained, even though the man’s CG face and head have a very different  
 8 shape and size than hers, and he is male and she is female. In fact, Contour output works capture the  
 9 woman’s performance with such fidelity that observers of the animation have commented that  
 10 despite the fact that the man’s CG face clearly has a male *shape*, the *motion* appears to be that of a  
 11 female face. The video of this and other Contour examples is available on Rearden’s home page  
 12 ([www.rearden.com](http://www.rearden.com), click on the MOVA logo and click on the video), or directly  
 13 ([www.rearden.com/mova.php](http://www.rearden.com/mova.php) or <https://vimeo.com/86130623>):



24       39. A similar retargeting process can be performed with a fictional head. For example, the  
 25 two photographs below are of a performer whose face was captured in the Contour system showing  
 26 the Skin Texture output work on the left and how she appeared to the naked eye (or a conventional  
 27 camera), showing the Makeup Pattern work combined with the Skin Texture work on the right:  
 28



40. The photograph below shows several views of a CG model of the head of a videogame character that was created by an artist:



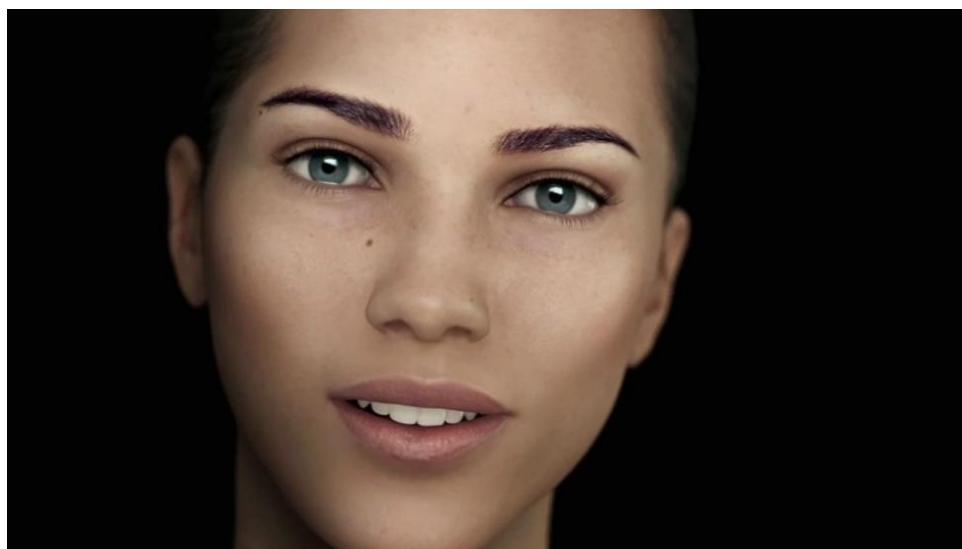
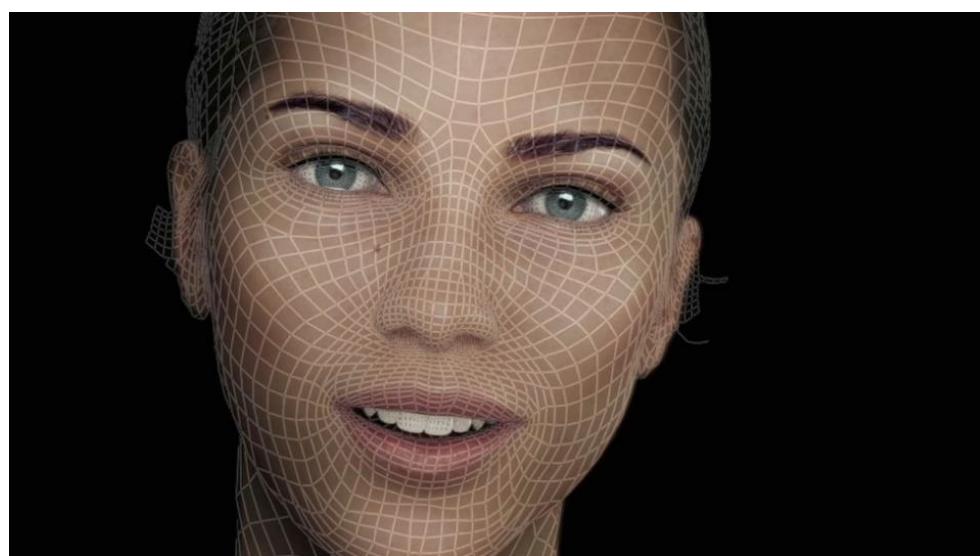
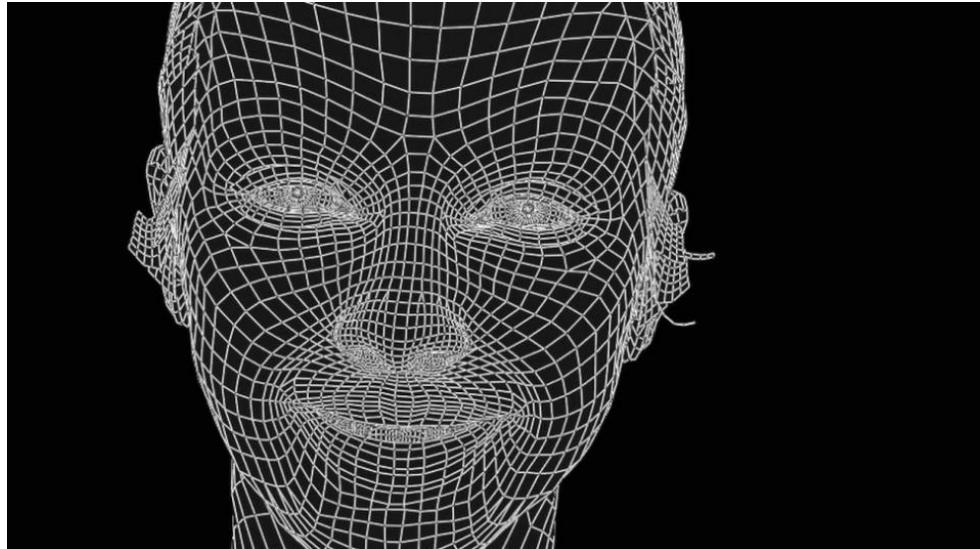
18 Although the head looks almost photoreal (it was only a test, not a polished CG model) when it is in  
19 a neutral pose and immobile, if the face were animated—whether through hand-drawn animation or  
20 prior art motion capture techniques—any photorealism would be lost because the human eye and  
21 brain are precisely attuned to notice any unnatural imperfection in facial motion. But, by using the  
22 Contour system and methods and the Contour program, every subtle motion of the human face is  
23 captured with sub-millimeter precision, producing output works that retain that precision and can be  
24 retargeted to any fictional CG head, bringing it to life.

25 41. The photographs below show the above videogame character's head in two  
26 expressions retargeted from the Tracking Mesh work generated by the Contour program from the  
27  
28

1 Contour facial capture of the above actress. Although the photorealism of the motion cannot be seen  
2 in static photographs, the motion is realistic and life-like, despite the fact that the performer's face is  
3 a very different shape than that of the CG head. Even in a static image, however, one can see how the  
4 expressionless CG model tracked the good-natured expression of the actress:



23  
24 42. A 3D "wireframe" (a mesh of 3D points) of the retargeted CG character's head is  
25 shown below, separately and overlaid upon the rendered image, and then the final rendered image:  
26  
27  
28



1           43. In summary, the Contour program transforms the facial performance of a live  
 2 performer, capturing the most subtle of facial motions with sub-millimeter precision to animate with  
 3 realism the life-like motion of faces of CG characters that appear in a finished movie, videogame, or  
 4 other production. The process begins by airbrushing or otherwise applying a random pattern of  
 5 phosphor-based makeup on a performer, having the performer sit or stand in the arc-shaped Contour  
 6 apparatus surrounded by an array of white lights and ultraviolet lights and two pluralities of cameras,  
 7 with the lights flashed rapidly and synchronized with the camera shutters as Skin Texture and  
 8 Makeup Pattern works are created by the Contour program. The Contour program then processes the  
 9 Makeup Pattern work to create thousands or even millions of points in 3D as the performer's face  
 10 moves, producing precise Captured Surface and Tracking Mesh works. Thus, the Contour program  
 11 produces output works that include the following:

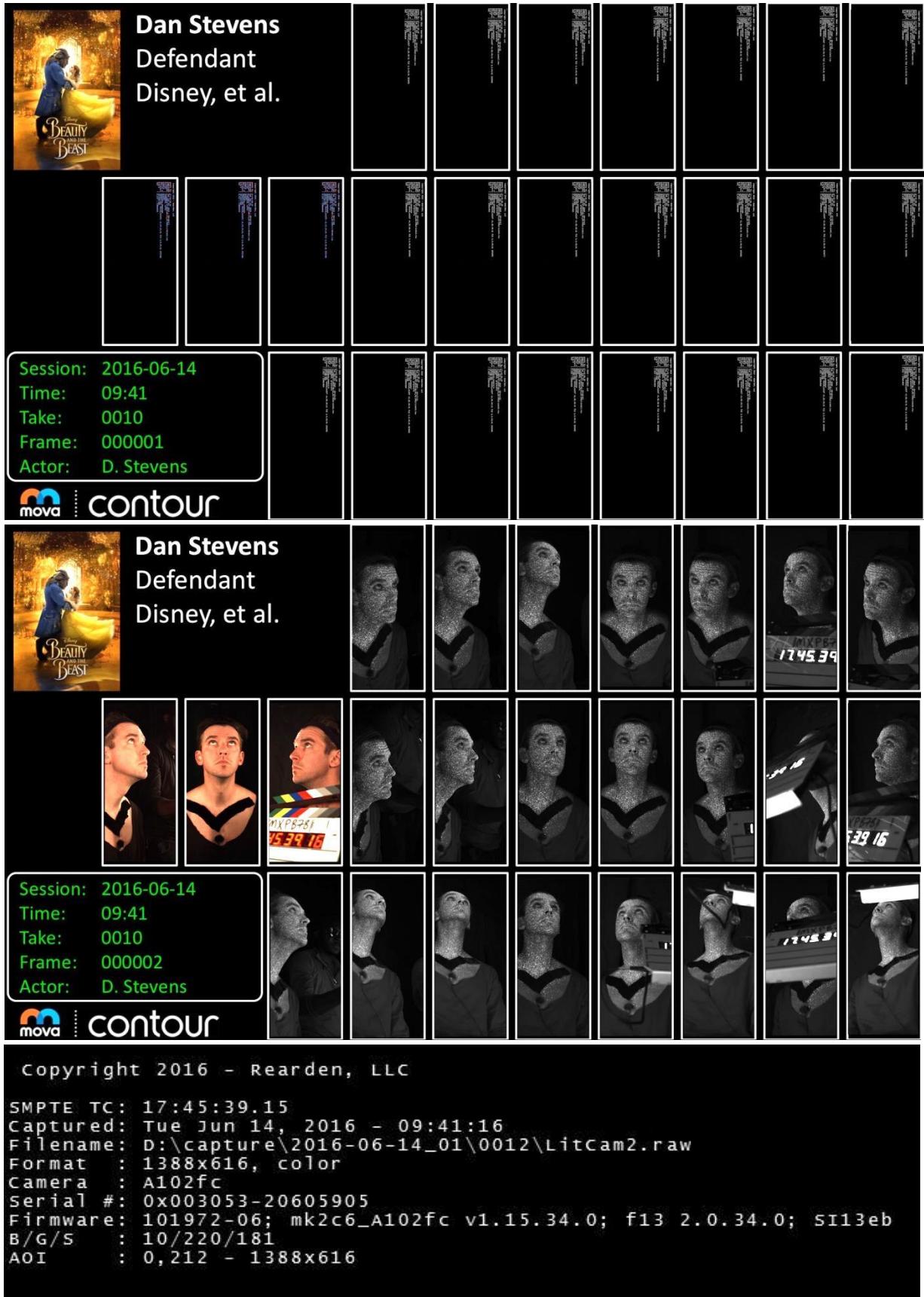
- 12           ▪ **Skin Texture**, showing the normal skin and facial features of the performer from multiple  
 13            angles, largely without visible makeup, in color
- 14           ▪ **Makeup Pattern**, showing the random pattern of makeup on the performer from multiple  
 15            angles, largely without visible skin or facial features, in grayscale
- 16           ▪ **Captured Surface**, a high-resolution moving 3D surface in the shape of the performer's  
 17            skin as the performer's face moves
- 18           ▪ **Tracking Mesh**, a high-resolution 3D mesh that exactly tracks the movement, stretching,  
 19            wrinkling, etc. as the performer moves their face.

20           The Tracking Mesh work can then be retargeted to a CG face, animating it with photorealistic and  
 21           natural motion, thereby precisely preserving every subtlety of human expression by the performer in  
 22           the final movie, videogame, or other production.

23           44. The Contour program includes a security mechanism that automatically affixes notice  
 24           of Rearden's Contour program copyright to Skin Texture and Makeup Pattern output works, an  
 25           example of which is shown in the three images below from a *Beauty and the Beast* Contour capture  
 26           of performer Dan Stevens. The first and second groups of images below show the first and second  
 27           frames, respectively, of the 3 color Skin Texture and 22 grayscale Makeup Pattern works. The first  
 28

1 frame contains the copyright notice, year, date, and time of the capture and technical Contour capture  
2 information; the second frame (and all subsequent frames) shows the performer's frame-by-frame  
3 capture by the Contour program from the angle of each camera in the Contour apparatus. The third  
4 image below is an enlargement of the first frame of one Skin Texture output work, showing the  
5 copyright notice which reads, "Copyright 2016 - Rearden LLC", and also includes the date and time  
6 of the Contour capture session: "Tue, Jun 14, 2016 - 09:41:16". The date and time stamping notifies  
7 any Contour program end-user that the copyright of the Contour program is controlled by Rearden  
8 LLC as of the date and time of the Contour capture. Since the end-user would not have access to the  
9 copyright notices embedded into the Contour program's source code, the current-year copyright  
10 notice serves as *express notification that Rearden LLC is asserting its copyright in the Contour*  
11 *program.* This copyright protection feature affixed copyright notice on every Contour program Skin  
12 Texture and Makeup Pattern work from the date of the Contour program theft in early 2013 until this  
13 Court's Preliminary Injunction Order<sup>17</sup> went into effect on June 17, 2016, finally halting use of the  
14 stolen Contour program. The below Contour capture was time-stamped on June 14, 2016, evidencing  
15 that the stolen Contour program was still in use by Disney MPG three days before the Injunction  
16 Order in *Shenzhensi, et al. v. Rearden, et al.* From its theft in 2013 through the June 17, 2016  
17 Injunction Order, many thousands of Contour program works were created for Disney movies using  
18 the stolen Contour program, each affixed with "Copyright [current date] - Rearden LLC" and the  
19 date and time of the capture.

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22  
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24  
25  
26  
27  
28 <sup>17</sup> *Shenzhensi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt. 188



1  
2 45. Within days after the Contour program, system and methods were unveiled at  
3 SIGGRAPH in 2006, tests and production began on one of the first movies utilizing Contour, *The*  
4 *Curious Case of Benjamin Button*. The movie was released in 2008. The photorealistic reverse-aging  
5 of Brad Pitt's face from an 87-year-old man backwards to his then-age of 44, and then further  
6 backwards to a younger age, was widely lauded as a visual effects ("VFX") milestone, the first ever  
7 photorealistic CG face, winning an Academy Award for Best Visual Effects for the team at the VFX  
8 production company, Digital Domain, which had hired Rearden to operate the Contour system to  
9 capture Brad Pitt's face and generate Contour program output works for the film.

10 46. In a widely-viewed TED (Technology, Entertainment, Design) Talk entitled, "How  
11 Benjamin Button Got His Face," Ed Ulbrich, then Digital Domain's Senior VP and Executive  
12 Producer (subsequently the CEO of successor Digital Domain 3.0, Inc.), confirmed that *The Curious*  
13 *Case of Benjamin Button* would have been "impossible" to make but for the Contour system and  
14 methods and the unprecedented facial capture precision and subtlety of the Contour program's output  
15 works. Ulbrich stated in the talk:

16 "We first got involved in *The [Curious Case of Benjamin Button]* project  
17 in the early 90s.... We took a lot of meetings and we seriously  
18 considered it. But at the time, we had to throw in the towel. **It was**  
**deemed impossible. It was beyond the technology of the day to**  
**depict a man aging backward...** The project came back to us a decade  
19 later.... **we came across a remarkable technology called Contour...**  
20 creating a surface capture as opposed to a marker capture... **This was**  
**when we had our 'Aha!'** **This was the breakthrough...**we could put  
21 Brad [Pitt] in this [Contour] device, and use this Contour process, and  
22 we could stipple on this phosphorescent makeup and put him under the  
23 black lights, and we could, in fact, scan him in real time... effectively,  
24 we ended up with a [Contour program output file] 3D database of  
everything Brad Pitt's face is capable of doing...we could transpose the  
[Contour program output file] data of Brad at [then-aged] 44 onto [a 3D  
model of] Brad at 87. So now, we had a 3D database of everything Brad  
Pitt's face can do at age 87, in his 70s and in his 60s."<sup>18</sup>

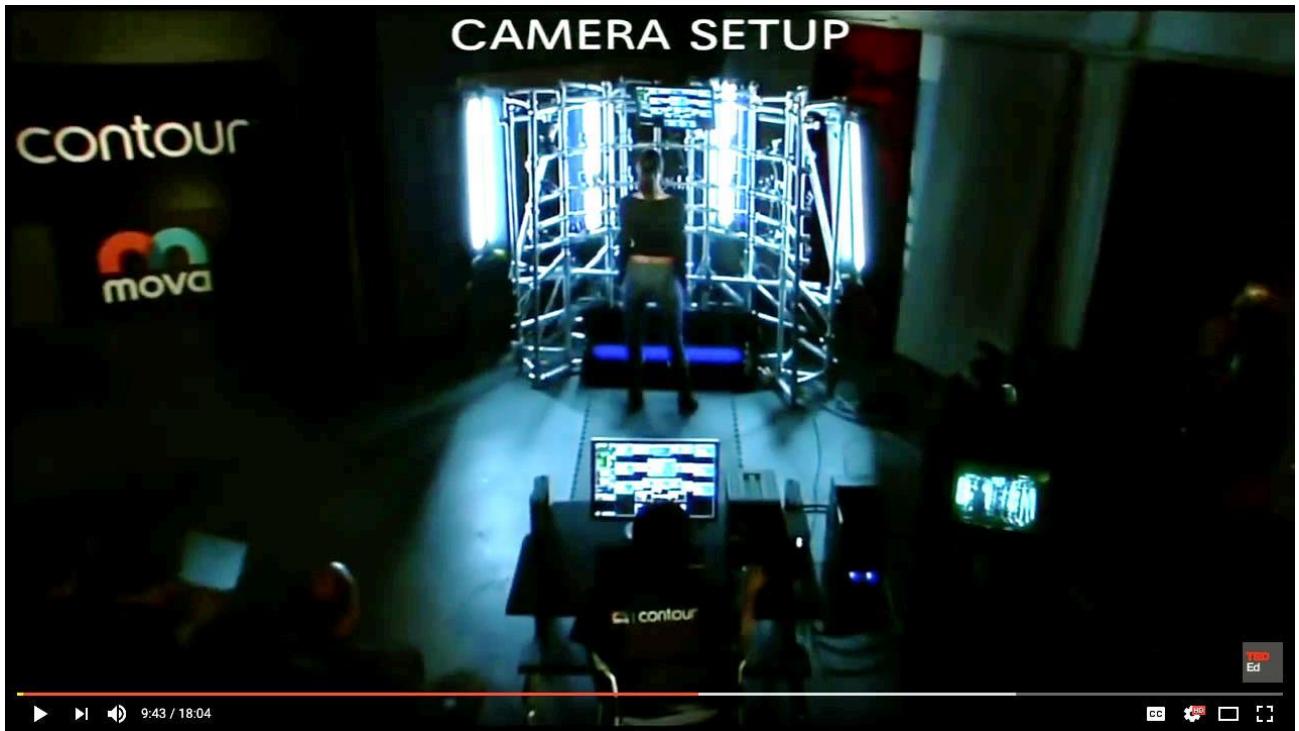
25 47. In the TED Talk, Ulbrich showed details of the Contour system and methods, Contour  
26 program output works, and how the CG face of Benjamin Button in the final movie was derived from  
27

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28 <sup>18</sup> Ulbrich, *op. cit.* (emphasis added).

1 the Contour program output works. The following paragraphs describe still frames from the TED  
 2 talk (labeled by “Minutes:Seconds” from the start of the video).

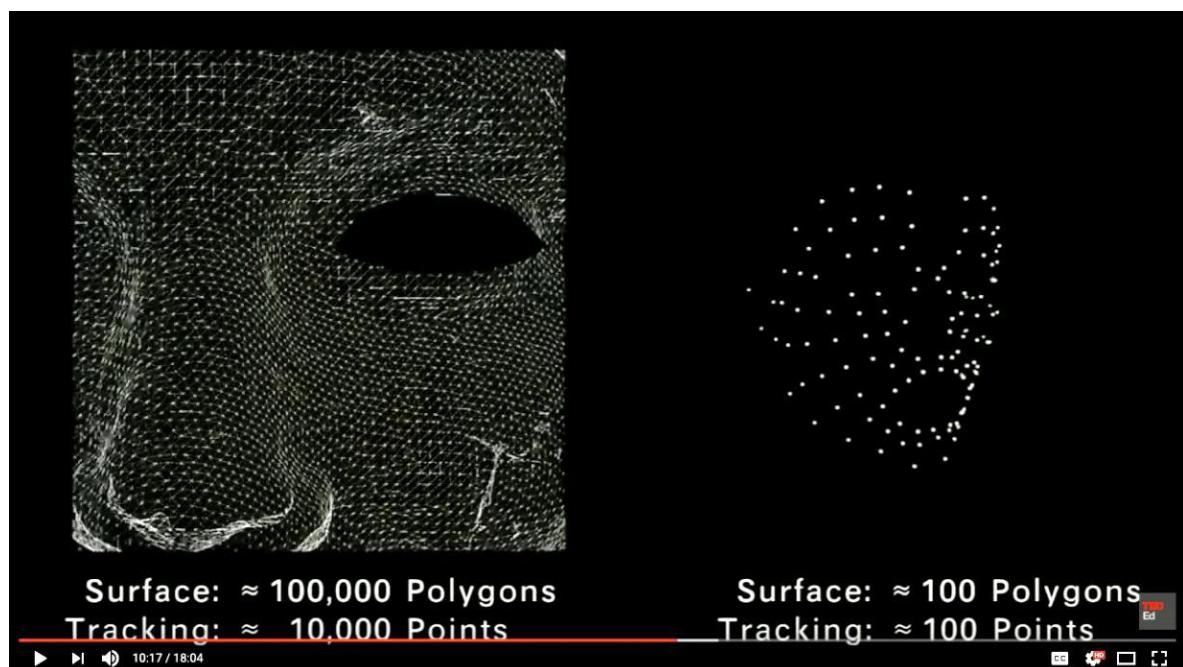
3       48.     **9:43:** The branded Contour apparatus, a semicircle of two pluralities of cameras with  
 4 synchronized white and ultraviolet lights surrounding a performer, with Rearden’s Mova LLC staff  
 5 operating the Contour system:



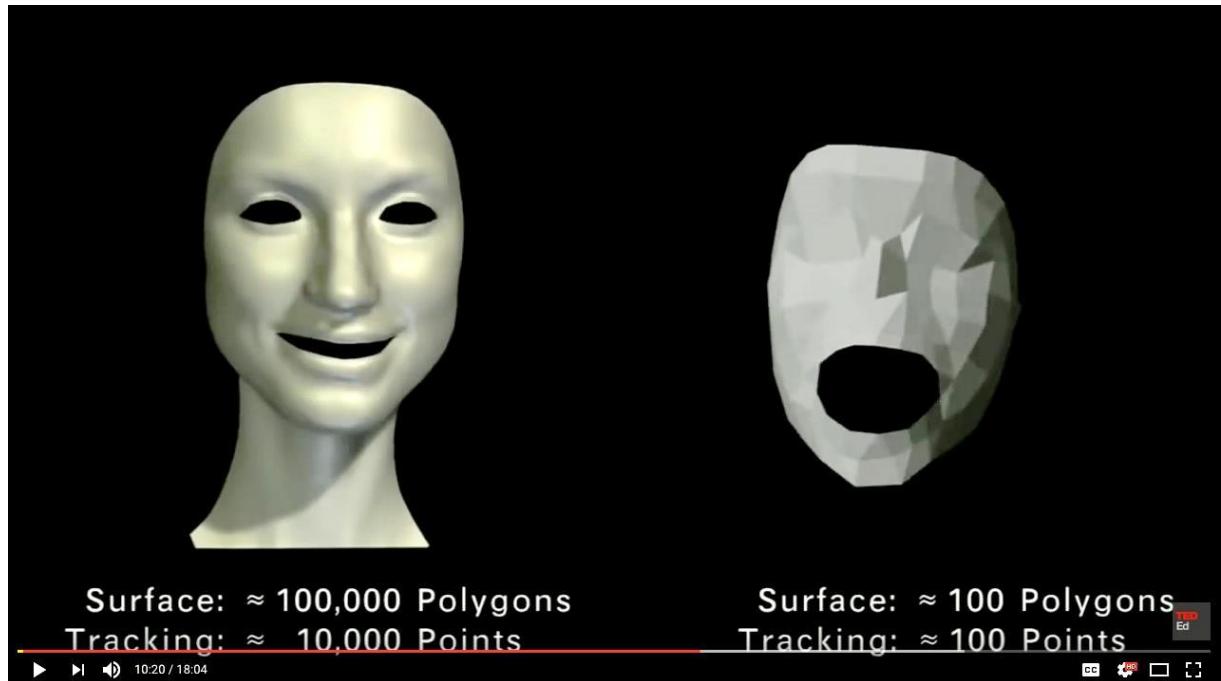
18       49.     **10:11:** On the left, Contour program **Skin Texture** output work, showing the  
 19 performer’s natural skin color and facial features. On the right, a performer with conventional motion  
 20 capture markers on her face:



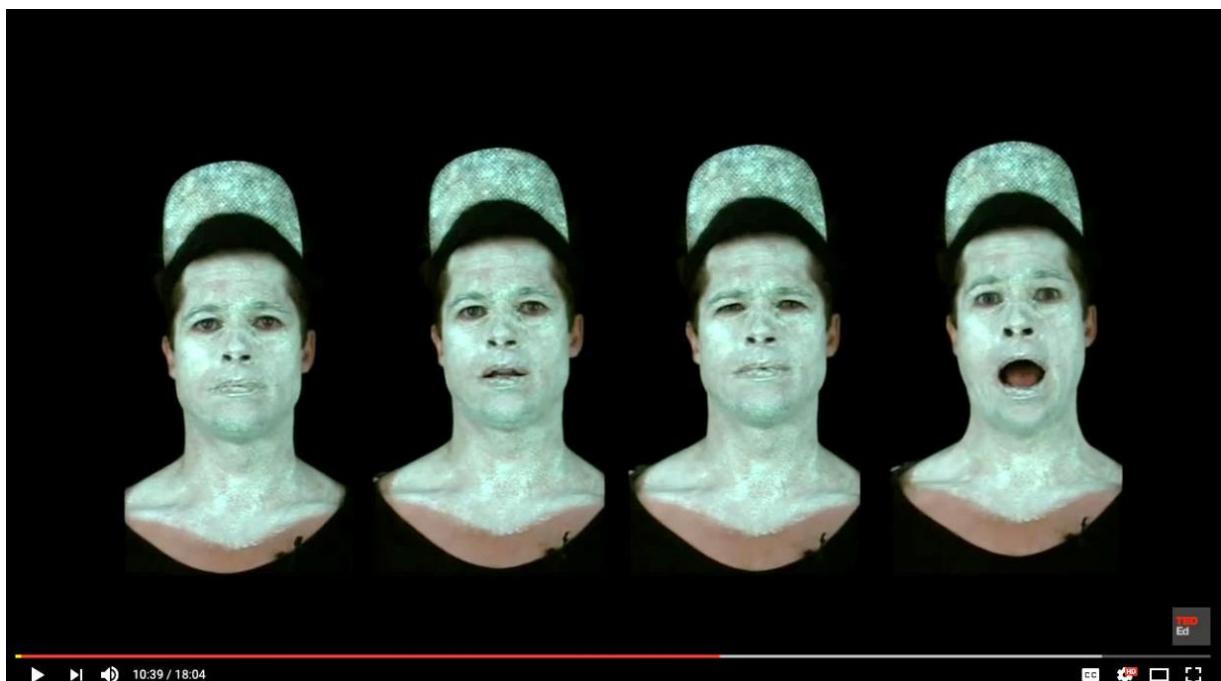
50. **10:17:** On the left, Contour program **Tracking Mesh** output work, showing hundreds of thousands of points in 3D, the Tracking Mesh work's resolution is so high that the points can only be seen by zooming in. In contrast, conventional marker-based resolution is shown on the right:



51. **10:20:** On the left the Contour program **Captured Surface** work, showing high-resolution surface geometry. In contrast, marker-based facial capture surface geometry on the right:



52. **10:39:** Contour program **Makeup Pattern** work, showing random patterns from glowing phosphor-based makeup. Each of the four Contour facial captures of Mr. Pitt was a separate motion facial performance used for a different facial expression of Benjamin Button. The Contour program created high-resolution **Captured Surface** and **Tracking Mesh** works from each of these:



1       53.     **10:49:** Contour program **Makeup Pattern** works, showing how many Contour output  
 2     works were used. Each of the Contour facial captures was a separate motion facial performance of  
 3     Mr. Pitt used for a different facial expression of Benjamin Button. The Contour program created  
 4     high-resolution **Captured Surface** and **Tracking Mesh** output works from each of these, creating a  
 5     database of Capture Surface and Tracking Mesh output works:

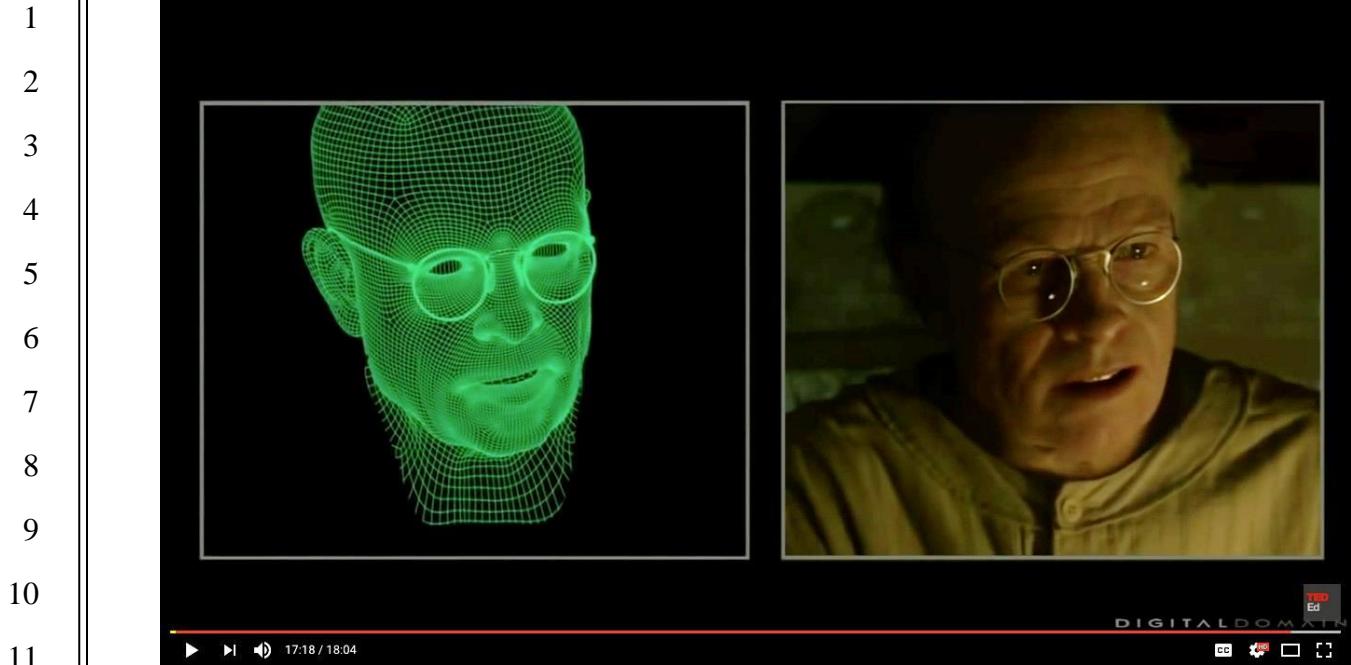


17       54.     **12:33:** Contour program **Makeup Pattern** work (left), **Captured Surface** work  
 18     (middle), retargeted **Captured Surface** and **Tracking Mesh** works to a fictional aged head (right),  
 19     are shown below. The 3D points of the Contour **Tracking Mesh** work of Mr. Pitt's actual face were  
 20     retargeted to corresponding points on the 3D fictional "maquette" (i.e. hand-made 3D bust) of Mr.  
 21     Pitt at age 87. As a simple example, the point on the right corner of Mr. Pitt's actual mouth could  
 22     correspond to the point on the right corner of the 3D maquette's mouth. As Mr. Pitt's smile widens  
 23     during the Contour capture session, moving the tracked point on the corner of his mouth outward, the  
 24     retargeted point on the 3D maquette's mouth would move proportionately outward causing the 87-  
 25     year-old smile to widen. As described by Mr. Ulbrich: "[Left:] This is Brad doing one of the  
 26     [character expression] poses. [Middle:] And here's the resulting [Captured Surface work] data that  
 27     comes from that, the model that comes from that. [Right:] Retargeting is the process of transposing  
 28

1 that [Captured Surface and Tracking Mesh work] data onto another model. And because the life  
 2 cast, or the bust—the maquette—of Benjamin was made from Brad, we could transpose the  
 3 [Captured Surface and Tracking Mesh work] data of Brad at 44 [years] onto Brad at 87[years].  
 4 Effectively, we ended up with a [Captured Surface and Tracking Mesh work] 3D database of  
 5 everything Brad Pitt's face is capable of doing...we could transpose the [Captured Surface and  
 6 Tracking Mesh work] data of Brad at [then-aged] 44 onto [a 3D maquette of] Brad at 87. So now,  
 7 we had a 3D database of everything Brad Pitt's face can do at age 87, in his 70s and in his 60s":



19       55.      17:18: On the left is 87-year-old fictional head maquette Tracking Mesh work  
 20 retargeted from a Contour program **Tracking Mesh** work, with a pair of glasses added in as a prop.  
 21 The final CG face is shown on the right after various steps such as texturing and lighting that is  
 22 applied to the maquette. The resulting CG face is integrated into the live-action footage of the final  
 23 scene:

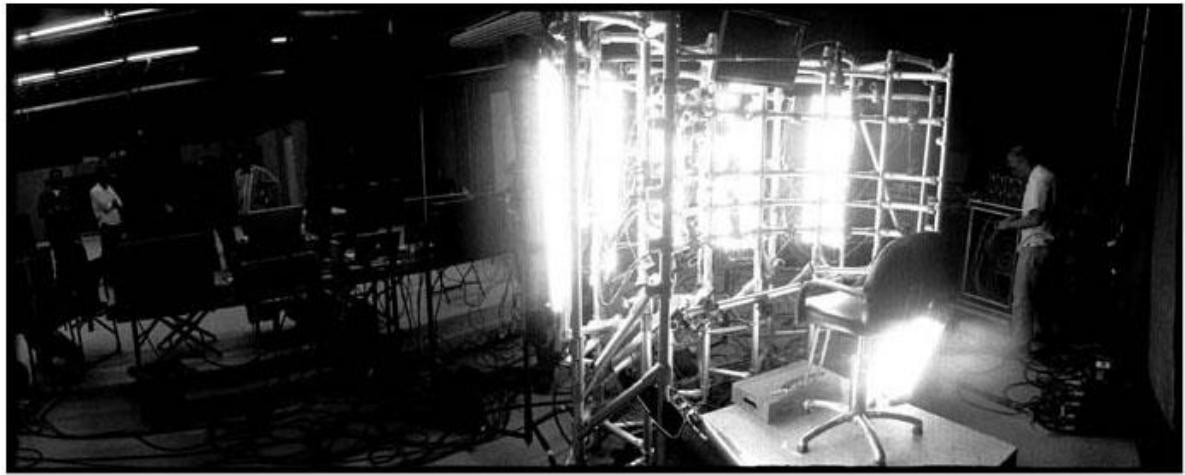


56. The photorealistic reverse-aging derived from the Contour system, methods and output works received wide acclaim when *The Curious Case of Benjamin Button* was released in December of 2008. But even before the movie's release, word of the unprecedented CG face realism achieved by the Contour system was spreading through the VFX industry. In July of 2008, defendant Disney hired Mova LLC for another reverse-aging movie, *TRON: Legacy*, the sequel to Disney's *TRON* released in 1982. Contour was used in a similar manner as in *Benjamin Button* to reverse-age the face of Jeff Bridges, the star of *TRON* and *TRON: Legacy*, to look as he did in 1982. Mr. Bridges published his experience of using Contour through wide-angle black-and-white photography and hand-written notations, below:<sup>19</sup>

<sup>19</sup> [http://www.jeffbridges.com/tron\\_book/tron\\_book\\_08.html](http://www.jeffbridges.com/tron_book/tron_book_08.html).

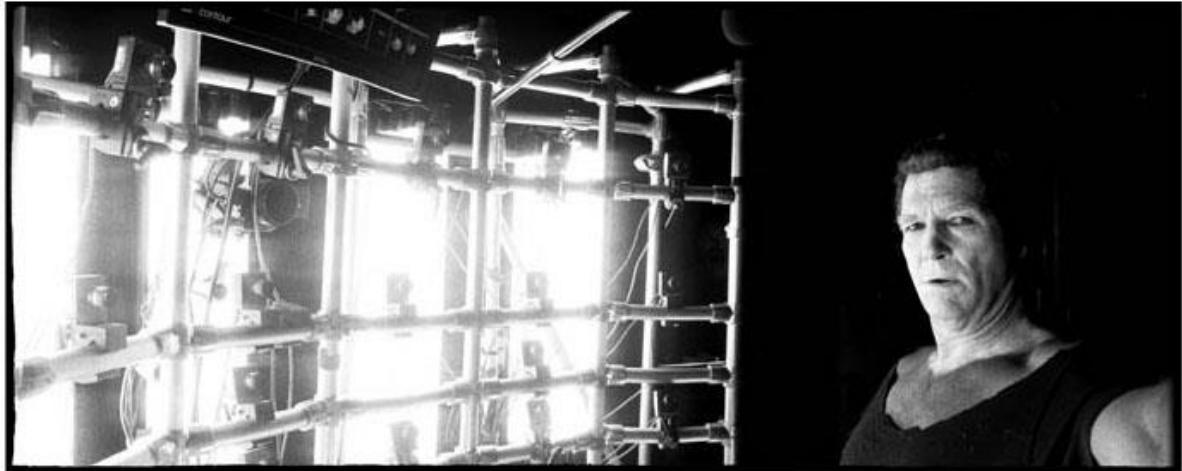


9 . . . and Ready . . .

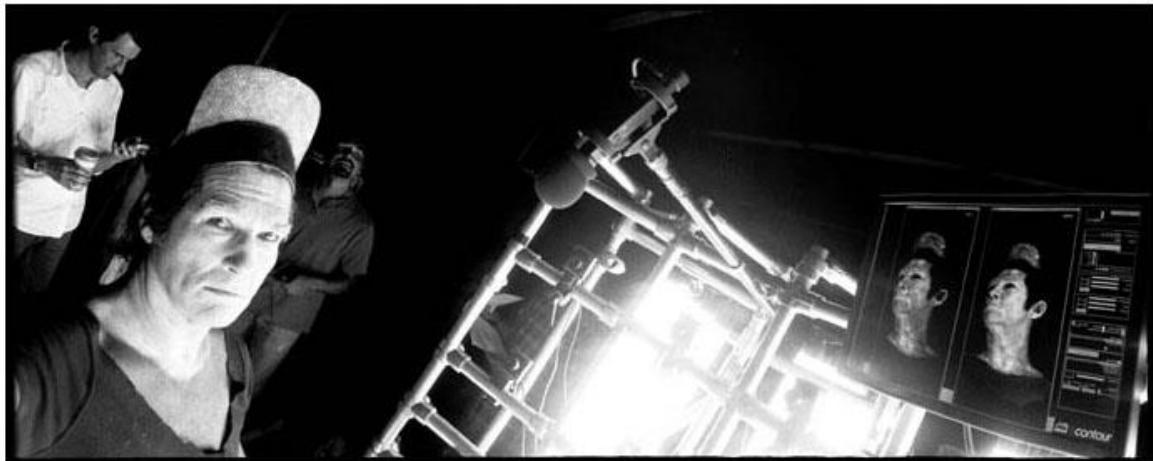


18 . . . to be digitized

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9 Mova Technology came up with this rig . . .



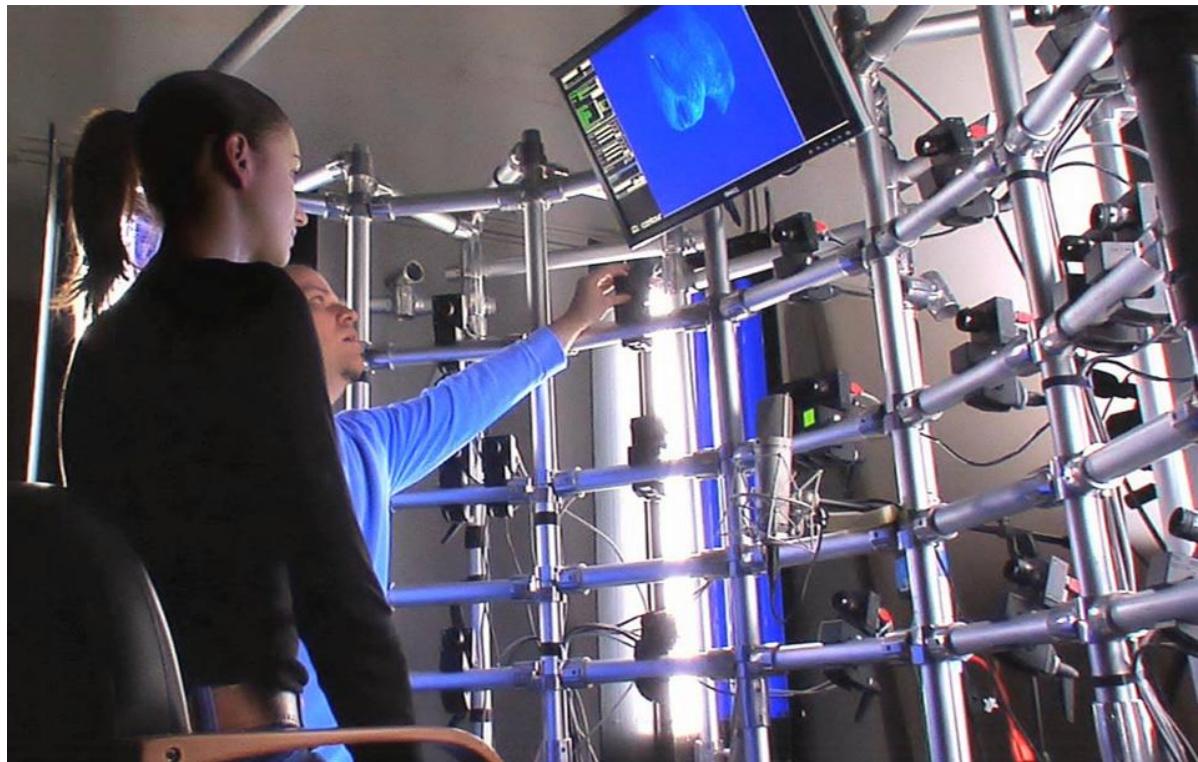
18 that captures every expression you can think of . . .



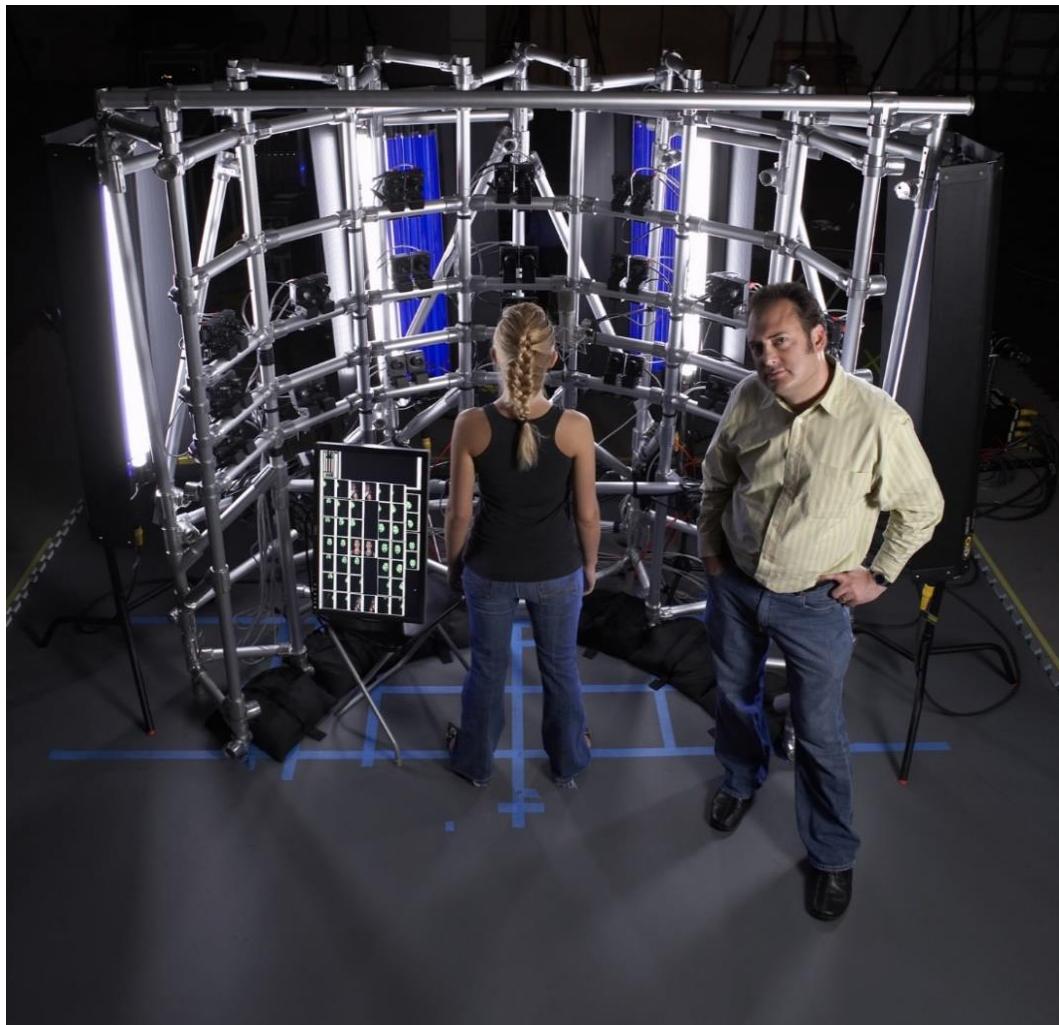
26 . . . from every angle

1       57. In addition to transforming an actor's age, the same process can be used for many  
2 other VFX purposes, such as transforming an actor's face into a creature (e.g. the Hulk in defendant  
3 Disney's *The Avengers*), or mapping one character's face onto another's (e.g. Rupert Grint (Ron  
4 Weasley) was transformed into Daniel Radcliffe (Harry Potter) in *Harry Potter and the Deathly  
5 Hallows, Part I*).

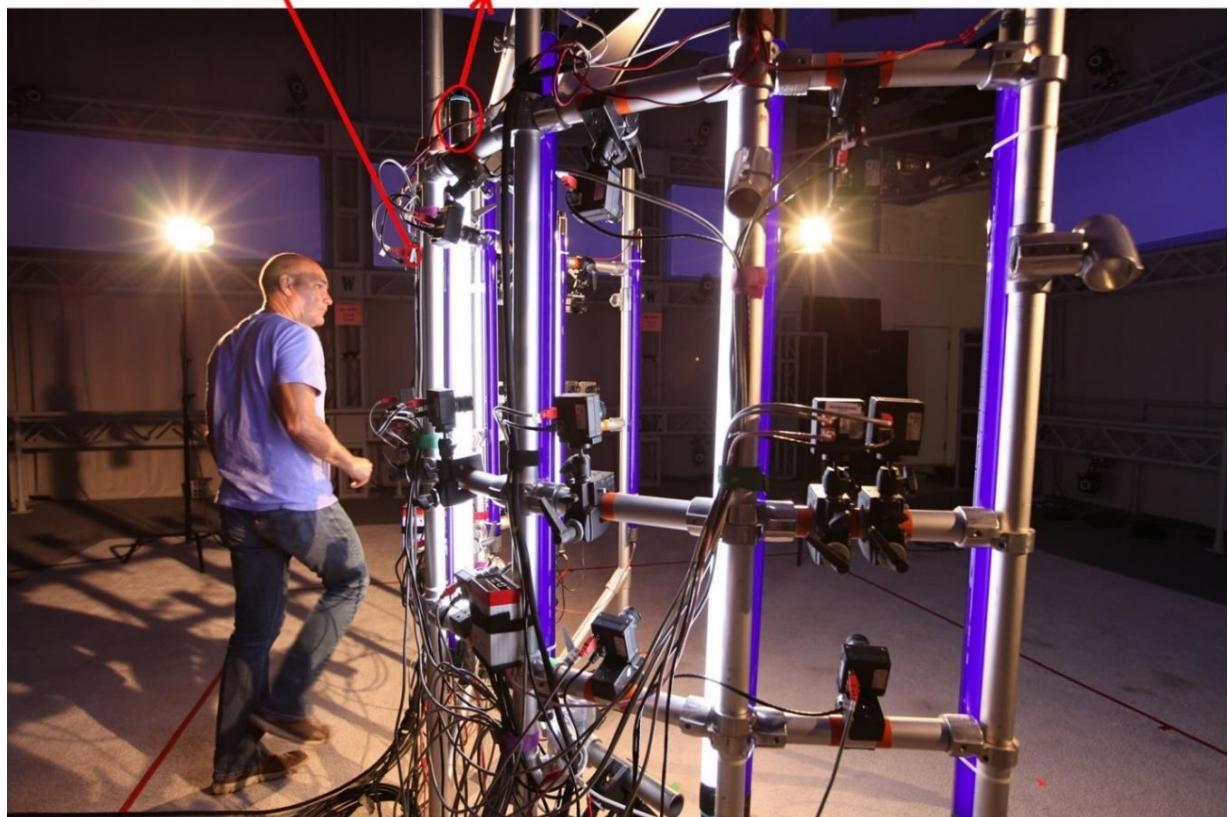
6       58. The following four photographs show the arc-shaped Contour apparatus, two  
7 pluralities of synchronized cameras, white light and ultraviolet light sources, computers running the  
8 Contour program, and actors wearing the phosphor-based makeup of the Contour systems and  
9 methods, used lawfully by defendants and operated by Rearden and its controlled entities in *TRON:*  
10 *Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter* (2012), and *The  
11 Avengers* (2012) (Mr. Perlman appears at the right in the last photograph):







59. And the following photograph released by Digital Domain shows the stolen Contour apparatus that was operated by the thieves and used unlawfully by defendants in at least *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*. Close inspection of the photo shown in the left inset, shows the thieves neglected to remove a Rearden asset tag on one of the stolen cameras. Rearden Asset #10393 is a Basler 102f Camera, Serial # 20606024, purchased on October 1, 2006 and stolen in 2013 along with the Contour program. Also, numerous tell-tale details specific to Contour's operation are visible in the stolen Contour apparatus photograph (e.g. the right inset shows black tape is wrapped around the end of a fluorescent lamp tube to prevent light spillage from the glowing electrode, a Contour-specific technique taught in Rearden's US Patent 7,567,293 at 19:66-20:15), confirming that the thieves used the identical Rearden system and methods:



60. The Contour system has no “operating manual.” It is a hand-built system, the  
operation of which is known only by Rearden’s MOVA team who invented it and Rearden’s MOVA  
employees and contractors who have been trained to use it under strict confidentiality obligations. It  
was not intended to be an end-user system and must be used carefully with knowledge of its  
operation for it to function correctly and safely. Defendants were able to use the Contour system only  
because they had contracted with DD3, which had hired the rogue former Rearden employees who  
orchestrated the theft to operate Rearden’s Contour system without authorization.

#### B. The Contour intellectual property

61. The Contour computer program is the subject of United States Copyright Registration  
No. TXU001977151, a copy of which is attached hereto as Exhibit 1. Plaintiff Rearden Mova is the

1 owner of Copyright Registration No. TXu001977151. The Contour program runs on computers that  
 2 are part of the Contour apparatus.

3       62. The Contour methods and systems are the subject of issued United States Patent Nos.  
 4 7,605,861 (the “‘861 Patent”), 8,659,668 (the “‘668 Patent”), 7,548,272 (the “‘272 Patent”),  
 5 7,567,293 (the “‘293 Patent”), and 8,207,963 (the “‘963 Patent”) (copies are attached as Exhibits 2,  
 6 3, 4, 5 and 6), as well as numerous United States pending patent applications, and international  
 7 patents and patent applications. Plaintiff Rearden Mova is the exclusive owner of the ’861, ’668,  
 8 ’272, ’293, and ’963 patents, as well as all other domestic patent applications and all international  
 9 patents and patent applications drawn to the Contour systems and methods. The Contour apparatus  
 10 and methods are embodiments of the claims of the ’861, ’668, ’272, ’293 and ’963 patents.

11       63. MOVA® and Contour® are the subject of United States Trademark Registration Nos.  
 12 U.S. Registration No. 3,843,152 and U.S. Registration No. 3,628,974, respectively. Copies of these  
 13 registrations are attached hereto as Exhibits 7 and 8.

14       64. The Contour systems and methods include know-how: confidential information that  
 15 derives independent economic value, both actual and potential, from not being generally known to  
 16 the public or other persons who can obtain economic value from its disclosure and use. The Contour  
 17 confidential information includes, without limitation:

- 18       ■ the source code and object code used in operating the Contour physical assets;
- 19       ■ many specific functionally-designed mechanisms, such as determining when part of the face  
           is obstructed from the view of certain cameras and seamlessly filling in those parts of the face  
           with views from other cameras;
- 20       ■ certain of the processes used along with the Contour physical assets, such as the timing  
           configurations for the Contour system;
- 21       ■ sequencing the steps of calibration, aperture adjustment and focus adjustment of the Mova  
           cameras;
- 22       ■ specific phosphor-based makeup formulations;
- 23       ■ techniques for applying makeup to performers being captured;

- 1 ▪ specific electrical set up safety measures of the Contour apparatus;
- 2 ▪ specific electrical modification of fluorescent light ballasts so as to operate safely;
- 3 ▪ specific performer medical considerations, such as, in the case of performers receiving Botox
- 4 treatments for facial wrinkles, scheduling shoots in specific intervals relative to their
- 5 treatments to maintain natural skin motion;
- 6 ▪ specific instructions to performers on how to perform in such a way to keep their faces within
- 7 the capture volume;
- 8 ▪ specific instructions to performers for specialized moves, such as singing, or bending the
- 9 head downward and upward, with the face going out of and then back into view of the
- 10 cameras; and
- 11 ▪ information regarding Rearden's and Rearden's controlled entities' prior customer
- 12 relationships and business terms.

13 65. Rearden and Rearden Mova have protected this confidential information by, *inter*  
14 *alia*, maintaining email, documents, source and object code, and other software in secure locations;  
15 controlling access to these locations; and by including confidentiality provisions in its agreements  
16 with all of its employees and contractors who have ever had access to any source code, object code,  
17 other software, electrical set up, proprietary electrical circuit designs, timing systems, interconnects,  
18 makeup formulations, phosphor research, results of proprietary tests, etc. The following  
19 confidentiality provisions of a Rearden employment agreement (Rearden referenced as "the  
20 Company"), are representative of those in all other Rearden employment and contractor agreements:

- 21 ▪ "At all times, both during my employment by the Company and after its termination, I will
- 22 keep in confidence and trust and will not use or disclose any Proprietary Information or
- 23 anything relating to it without the prior written consent of an officer of the Company..."
- 24 ▪ "I agree that during my employment by the Company I will not remove any Company
- 25 Documents and Materials from the business premises of the Company or deliver any
- 26 Company Documents and Materials to any person or entity outside the Company, except as I
- 27 am required to do in connection with performing the duties of my employment. I further

1 agree that, immediately upon the termination of my employment by me or by the Company  
2 for any reason ... I will return all Company Documents and Materials, apparatus, equipment  
3 and other physical property, or any reproduction of such property ...”

4 66. The Contour confidential information constitutes trade secrets as that term is defined  
5 in the California Uniform Trade Secrets Act ("CUTSA") at sections 3426 to 3426.11 of the  
6 California Civil Code, and the Defense of Trade Secrets Act at 18 U.S.C. § 1832(b), *et seq.*

7 67. The “Contour Assets” at issue herein include the Contour technology, and related  
8 hardware and software, source code, domestic and international patents and patent applications,  
9 domestic and international trademarks, copyrights, trade secrets, domain names, business records,  
10 and various related physical goods (the “Contour Assets”).

11 **C. Rearden’s use of the Contour program, system, and methods in fifteen major motion  
12 pictures, and industry acclaim**

13 68. Rearden and/or its controlled affiliates operated the Contour system for, and  
14 authorized use of its system, methods and Contour program output works by Paramount Pictures for  
15 *“The Curious Case of Benjamin Button”* (2008) and *Transformers: Dark of the Moon* (2011).

16 69. Rearden and/or its controlled affiliates operated the Contour system for, and  
17 authorized use of its system, methods and Contour program output works by Universal Studios in  
18 *The Incredible Hulk* (2008) and *Snow White and the Huntsman* (2012).

19 70. Rearden and/or its controlled affiliates operated the Contour system for, and  
20 authorized use of its system, methods and Contour program output works by 20<sup>th</sup> Century Fox in  
21 *Percy Jackson and the Olympians: The Lightning Thief* (2010).

22 71. Rearden and/or its controlled affiliates operated the Contour system for, and  
23 authorized use of its system, methods and Contour program output works by Sony Pictures in *The  
24 Amazing Spider-Man* (2012).

25 72. Rearden and/or its controlled affiliates operated the Contour system for, and  
26 authorized use of its system, methods and Contour program output works by Warner Brothers  
27  
28

1 Studios in *Harry Potter and the Deathly Hallows*, Part 1 (2010) and Part 2 (2011), *Green Lantern*  
 2 (2011), *Jack the Giant Slayer* (2013), and *Gravity* (2013).

3 73. And Rearden and/or its controlled affiliates operated the Contour system for, and  
 4 authorized use of its system, methods and Contour program output works by defendants Disney  
 5 Company and Disney MPG in *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides*  
 6 (2011), *John Carter* (2012), and *The Avengers* (2012) (including defendant Marvel).

7 74. In each of the above fifteen films, the motion picture studios performed a routine  
 8 intellectual property due diligence prior to contracting with Rearden for use of the Contour systems  
 9 and methods, in part to verify that Rearden and/or Rearden-controlled affiliates owned the Contour  
 10 Assets and technology and had the right to use them for the benefit of the studios.

11 75. Rearden and/or Rearden-controlled affiliates have built considerable good will in the  
 12 Contour Assets and technology. Rearden and/or Rearden-controlled affiliates used the Contour  
 13 systems and methods in the fifteen major motion pictures identified above, which collectively  
 14 grossed roughly \$9.5 billion in global box office. Five of these movies are in the top-25 highest-  
 15 grossing movies since 2008 (when the first Contour movie was released), including the number one  
 16 highest grossing movie in each of 2011 and 2012<sup>20</sup>. The Contour system and methods and the  
 17 Contour program have been the subject of numerous motion picture industry press articles in which  
 18 movie industry luminaries like director David Fincher have lauded the Contour technology:

19 “Contour’s promise is enormous,” Fincher said. “The notion that the  
 20 human face in all its subtleties could be mapped in real time and with  
 21 such density of surface information opens up so many possibilities for  
 22 both two- and three-dimensional image makers and storytellers.”<sup>21</sup>

23 The Contour system and methods and the Contour program have been the subject of an invited  
 24 presentation by Steve Perlman to the Director’s Guild of America<sup>22</sup>, and they were identified as a  
 25 “breakthrough” in the aforementioned TED talk<sup>23</sup>. Contour’s improvements over prior facial

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26 <sup>20</sup> [www.boxofficemojo.com](http://www.boxofficemojo.com).

27 <sup>21</sup> Marlowe, July 31, 2006, *op. cit.*

28 <sup>22</sup> Directors Guild of America, July 28, 2007, *op. cit.*

<sup>23</sup> *Op. cit.*

1 performance capture technologies have been acclaimed by major motion picture actors, producers,  
 2 directors, and top VFX professionals, including Ed Ulbrich in his TED Talk description of Contour  
 3 and how it was essential in the creation of *The Curious Case of Benjamin Button*.<sup>24</sup> And on  
 4 February 9, 2015, the Academy of Motion Picture Arts and Sciences awarded the Scientific and  
 5 Technical Award to the MOVA [Contour] facial performance capture system.<sup>25</sup>

6 **D. Transfer of the Contour Assets to OnLive, Inc., OL2, Inc., and Rearden Mova**

7 76. Rearden's Contour assets and apparatus (called the "Contour Assets" herein) as well  
 8 as Rearden's other motion capture assets, along with videogame streaming technology, was spun out  
 9 of Rearden in 2007 into OnLive, Inc., a corporation controlled by Rearden. OnLive, Inc. thereafter  
 10 owned all of the Contour Assets, both Contour and other motion capture technology.

11 77. On August 17, 2012, OnLive, Inc. assigned all of its assets, including the Contour  
 12 Assets, to OL2, Inc. as part of an assignment for the benefit of creditors ("ABC"). On information  
 13 and belief, OL2, Inc. was primarily focused on the video gaming unit of OnLive, Inc., and was not  
 14 interested in offering any Contour movie production services.

15 78. In October of 2012, Rearden learned that OL2, Inc. was interested in selling the  
 16 Contour Assets and apparatus, and Rearden ultimately decided to reacquire them. Rearden formed a  
 17 wholly-owned subsidiary, MO2 LLC, as a vehicle to acquire the Contour Assets from OL2, Inc.

18 79. Rearden's CEO Perlman tasked his employee Greg LaSalle with management of  
 19 MO2 LLC. LaSalle had worked with Rearden from 1999 to 2007, and between 2007 and August 17,  
 20 2012 worked for OnLive, Inc. LaSalle was rehired by Rearden LLC on August 20, 2012.

21 80. On February 11, 2013, OL2, Inc. transferred the Contour Assets to MO2 LLC through  
 22 a Membership Interest and Asset Purchase and Sale Agreement. MO2 LLC is wholly owned by  
 23 Rearden.

24 81. On April 19, 2013, MO2 LLC transferred the Contour Assets to another wholly-  
 25 owned Rearden company, plaintiff Rearden Mova LLC.

27 <sup>24</sup> Ulbrich, *Op. cit.*

28 <sup>25</sup> <http://oscar.go.com/news/oscar-news/150209-ampas-sci-tech-awards-2015-winners>

1           82. On September 18, 2014, Rearden recorded patent assignments for the Contour Asset  
 2 patents, reflecting the assignment from OL2, Inc. to MO2 LLC made in the Membership Interest and  
 3 Asset Purchase and Sale Agreement.

4           83. Rearden also recorded patent assignments for the Contour Asset patents, reflecting the  
 5 assignment from MO2 LLC to Rearden Mova on April 19, 2013. However, the execution dates of  
 6 the online forms were incorrectly filled in with the recordation dates of September 18, 2014 (and in  
 7 one case, September 8, 2014). As soon as it became aware of the errors, Rearden corrected the  
 8 erroneous execution dates to the correct date: April 19, 2013.

9           **E. Shenzhenshi's transparently false ownership claims**

10          84. Unknown to Rearden, starting in October 2012, rogue Rearden employee LaSalle was  
 11 in negotiation with a company called Digital Domain 3.0, Inc. (“DD3”), then a People’s Republic of  
 12 China and India-owned Delaware Corporation doing business in Venice Beach, California under  
 13 “DD3” or “Digital Domain” business names. DD3 is a successor company to prior Digital Domain  
 14 companies that Rearden, OnLive, Inc., and LaSalle (on behalf of Rearden and OnLive, Inc.) had  
 15 worked with previously in movie productions making authorized use of the Contour technology  
 16 identified above. DD3 is currently wholly-owned by Digital Domain Holdings Ltd. (“DDHL”), a  
 17 Hong Kong exchange-listed Bermuda corporation with its principal place of business in Hong Kong.

18          85. On February 20, 2015, Shenzhenshi Haitiecheng Science and Technology Co., Ltd.  
 19 (“Shenzhenshi”), allegedly another People’s Republic of China corporation with its purported  
 20 principal place of business in Shenzhen, China, filed a declaratory judgment action against Rearden  
 21 and various other Rearden entities in this judicial district, Case No. 3:15-cv-00797-JST, alleging that  
 22 it had acquired the Contour Assets by assignment from MO2 LLC on May 8, 2013. Shenzhenshi  
 23 further alleged that it had granted an exclusive license to the Contour Assets to DD3.

24          86. But as set forth above, MO2 LLC did not own the Contour Assets on May 8, 2013, so  
 25 it could not have assigned them to Shenzhenshi on that date. Rather, MO2 LLC had previously  
 26 assigned the Contour Assets to Rearden Mova LLC on April 19, 2013. Further, on May 8, 2013  
 27 LaSalle was not a Rearden employee, and as an employee or not, LaSalle never had authority to sell  
 28

1 the MO2 LLC Assets to anyone. Nor could Shenzhensi have granted a license of the Contour  
 2 Assets to Digital Domain because it never owned the Contour Assets. Shenzhensi, DD3 and LaSalle  
 3 knew that the MO2-Shenzhensi transaction was a ruse. LaSalle wrote to his attorneys, “[DD3] are  
 4 going to actually acquire the Contour Assets through one of their Chinese companies [Shenzhensi].  
 5 I believe this is so it would be nearly impossible for Steve [Perlman] to go after them....They will  
 6 indemnify me against any claims brought by Rearden and Steve Perlman.”<sup>26</sup>

7 87. The day after the Court granted Rearden permission to file counterclaims, a company  
 8 called Virtue Global Holdings, Ltd., a British Virgin Islands corporation, suddenly appeared in the  
 9 Shenzhensi case represented by Shenzhensi’s counsel. Shenzhensi absconded from the litigation.  
 10 Months later Virtue Global Holdings alleged that Shenzhensi had assigned the Contour Assets to  
 11 Virtue Global Holdings on December 17, 2015. But again, as set forth above, Shenzhensi never  
 12 owned the Contour Assets and therefore could not have assigned them to Virtue Global Holdings.

13 88. Rearden asserted counterclaims for declaratory relief against Shenzhensi and Virtue  
 14 Global Holdings affirming Rearden’s ownership of the Contour Assets, and for patent, trademark,  
 15 and copyright infringement, misappropriation of trade secrets, fraudulent transfer, and other causes  
 16 of action, against Shenzhensi and Virtue Global Holdings.

17 89. The Contour Asset ownership and fraudulent transfer claims were bifurcated and tried  
 18 in December, 2016. On August 11, 2017, the Court entered a statement of decision in Rearden’s  
 19 favor. It found that Rearden had at all material times been the owner of the Contour Assets,  
 20 apparatus and program.

21 **F. Defendants’ unauthorized use of the Contour Assets**

22 90. Once LaSalle was hired by DD3 in or about May, 2013, DD3 took possession of the  
 23 patented Contour Assets for Shenzhensi. On information and belief, LaSalle had access to the  
 24 secure storage facility where the Contour Assets were kept, and assisted DD3 in taking unauthorized  
 25 possession of the patented Contour apparatus and copies of the copyrighted Contour program.

26 *Shenzhensi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, HEYL001594.

1       91. Thereafter, DD3 began secretly offering Contour facial performance capture services  
 2 and Contour program output works to motion picture studios and production companies, including  
 3 defendants. The system used by DD3 is the *system* developed and constructed by Rearden and stolen  
 4 by DD3 from the secure storage facility, which includes commercial embodiments of the system  
 5 claims in the Contour patents. And the statements by *Beauty and the Beast* co-stars Stevens and  
 6 Watson, and Director Condon, confirm that DD3 performed the *methods* that are the commercial  
 7 embodiments of the method claims of the Contour patents.<sup>27</sup>

8       92. But even before Shenzhenshi allegedly acquired the Contour Assets, and before DD3  
 9 began offering Contour facial performance capture services and output works, Disney and DD3 were  
 10 in negotiation to acquire the Contour Assets. LaSalle testified that from “September of 2012...  
 11 [u]ntil sometime in April of 2013” he spoke to “The CTO of the Walt Disney Company,”  
 12 “[s]omebody at Industrial Light and Magic<sup>28</sup>, and the president of Digital Domain” about “potential  
 13 partnerships or acquisitions of [the] Mova [Assets]”<sup>29</sup>. Ken Pearce, LaSalle’s accomplice and  
 14 another rogue Rearden former employee, testified that “after October 2nd[, 2012] – [he] talked with  
 15 ILM and Disney about the Mova assets”<sup>30</sup>. LaSalle testified that his “discussions with Digital  
 16 Domain, Industrial Light and Magic and Walt Disney” were exclusively “about licensing or  
 17 acquiring [the Mova asset].”<sup>31</sup> Former DD3 Chairman Seah Ang testified that in “early 2013”, then  
 18 DD3 CEO Ed Ulbrich told him that “Mova is for sale and ... if we don’t take this asset, this asset  
 19 will soon go to our competitor ... Industrial Light & Magic, and also Disney.”<sup>32</sup> On February 1,  
 20 2013, Pearce emailed Disney’s Chief Technical Officer, Andy Hendrickson, to set up a conference to  
 21  
 22  
 23

---

24       <sup>27</sup> Paris Press Conference, Feb 17, 2017. *Op. cit.*

25       <sup>28</sup> Industrial Light & Magic, AKA ILM, was acquired by the Walt Disney Company in late 2012.

26       <sup>29</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt. 385 at 148-149.

27       <sup>30</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt. 385 at 69.

28       <sup>31</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt. 383 at 168:169.

29       <sup>32</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt. 385 at 88.

1 discuss Disney acquiring “all the MOVA assets (patents, software, etc.).” Hendrickson had been  
 2 talking internally at Disney “about MOVA,” and agreed to confer with LaSalle on February 14<sup>33</sup>:

3 **MOVA inquiry**  
 4 7 messages

5 ken pearce <kenpearce@gmail.com>  
 6 Reply-To: kenpearce@gmail.com  
 To: andy.hendrickson@disney.com  
 Cc: Greg LaSalle <greg@yahoo@comcast.net>  
 Bcc: ken pearce <kenpearce@gmail.com>

7 Fri, Feb 1, 2013 at 2:18 PM

8 Hi Andy,

9 As you may have know, MOVA’s parent company OnLive went through bankruptcy last year. As a result, **all the MOVA**  
 10 **assets (patents, software, etc.)** came under new ownership and we were not able to operate.

11 Recently all the assets have been pulled together again and Greg LaSalle is in the final stages of legally acquiring them.  
 12 So, we’re exploring options for partnering with a studio or other company which would be interested in this technology,  
 13 hopefully integrating it with their own efforts for facial motion and modeling.

14 We’ve been maintaining close ties with our clients at ILM who are aware of the current situation and still hope to use us  
 15 for Star Wars 1313 and ongoing film projects, but we know that ILM as an entity doesn’t normally acquire technologies.

16 Based on an earlier conversation we had with you last year, we’re speculating that in addition to ILM, the MOVA  
 17 technology might also have some usefulness to Disney with regard to theme parks or work done by Disney’s various  
 18 research divisions.

19 Let me know if you’d like to discuss any interest or possibilities. Thanks and I hope all’s well!

20 Cheers,

21 Ken Pearce

22 415-786-9151

23 Hendrickson, Andy <Andy.Hendrickson@disney.com>  
 24 To: "kenpearce@gmail.com" <kenpearce@gmail.com>  
 Cc: Greg LaSalle <greg@yahoo@comcast.net>, Terri Shevy <terri.shevy@disneyanimation.com>

25 Tue, Feb 12, 2013 at 8:59 AM

26 Greg, Ken

27 I have been talking internally about MOVA “reading the tea leaves”

28 We should have a phone chat

29 Terri can help set that up

30 -Andy

31 [Quoted text hidden]

32 Shevy, Terri <Terri.Shevy@disney.com>  
 33 To: "kenpearce@gmail.com" <kenpearce@gmail.com>, Greg LaSalle <greg@yahoo@comcast.net>

34 Tue, Feb 12, 2013 at 9:14 AM

35 Good morning. **Andy has some time on Thursday afternoon. Does 2:30 work for you?**

36 Terri



37 Terri Shevy | Assistant to **Andy Hendrickson, CTO**  
 38 500 South Buena Vista Street, Burbank, CA 91521-4938  
 Tel 818.460.9353 (8426)

39 93. On March 27, 2013, Rearden wrote LaSalle a demand letter (the “Rearden Demand  
 40 Letter”) asserting that LaSalle was contractually-obligated to return to Rearden “performance motion  
 41 capture intellectual property,” which LaSalle was then in negotiations to sell to Disney and which  
 42 Disney knew included at least “patents” and “software.”<sup>34</sup>

43  
 44 <sup>33</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, SHST0007127. Red  
 45 highlighting boxes added.

46 <sup>34</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, HEYL000306-HEYL000307  
 47 (Red highlighting boxes added).

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13 WASHINGTON, D.C.  
14 TOKYO, LONDON, BRUSSELS,  
15 BEIJING, SHANGHAI, HONG KONG

16 March 27, 2013

17 Writer's Direct Contact  
18 415.268.6915  
19 ETate@mofa.com20 Via Overnight Mail and Electronic Mail  
21 [g2@mova.com](mailto:g2@mova.com)22 Greg Lasalle  
23 228 Del Rosa Way  
24 San Mateo, CA 94403

25 Re: Performance Motion Capture Intellectual Property

26 Dear Mr. Lasalle:

27 This law firm has been retained to represent Rearden LLC ("the Company") regarding the  
28 performance motion capture intellectual property and production assets you acquired while  
employed by the Company (collectively, "Acquired IP"). Any further communications  
regarding the Acquired IP should be directed to me.29 We understand that the Company has repeatedly attempted to dialogue with you regarding  
30 this matter. Most recently, on March 20, 2013 Steve Perlman contacted you via email in a  
31 further attempt to address the Acquired IP and other outstanding issues. In that email,  
32 Mr. Perlman requested that you contact him by the end of the week. You failed to do so.  
33 Accordingly, the Company had no choice but to refer this matter to its legal counsel.34 As you know, when you began your employment with the Company, you signed a  
35 Proprietary Information and Inventions Agreement ("PIIA"). The PIIA states that the  
36 Proprietary Information related to the Company's Business includes "performance motion  
37 capture." You are obligated under the PIIA to assign the rights to any Proprietary  
38 Information you acquired while an employee to the Company. The Acquired IP consists of  
39 performance motion capture intellectual property, which is Proprietary Information subject to  
40 the PIIA. Accordingly, your failure to turn over to the Company the Acquired IP is a clear  
41 violation of your obligations under the PIIA, for which the Company has instructed us to  
42 seek any and all available legal remedies if we are unable to resolve this issue immediately.43 The Company would prefer to get this matter resolved and resume offering production  
44 services as soon as possible without further delay. Please contact me by Monday, April 1,  
45 2013, to discuss a resolution to this issue, including your potential involvement in the

46 sf-3267407

47 94. LaSalle notified Disney that he had received the Rearden Demand Letter and as a  
48 result, Disney "dropped out" of the running to acquire the Contour Assets.<sup>35</sup> Only DD3 remained, but  
49 after receiving the Rearden Demand Letter, it also declined to acquire the Contour Assets itself, and  
50 instead had its shadowy foreign affiliate Shenzhenshi acquire the Contour Assets and license them  
51 back to DD3 "...so it would be nearly impossible for Steve [Perlman] to go after them."<sup>36</sup>52 95. Despite the fact that defendant Disney was sufficiently concerned about the Rearden  
53 Demand Letter to drop out of acquiring the Contour Assets that it knew included at least patents and54 <sup>35</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No.15-797, Dkt: 383, p. 169, *op. cit.*55 <sup>36</sup> *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No.15-79717, HEYL001594, *op. cit.*

1 software, despite the fact that it knew that Rearden had owned and claimed to still own the Contour  
 2 Assets that included patents and other intellectual property, and it knew that Rearden had asserted in  
 3 the demand letter that LaSalle was unlawfully in possession of the Contour Assets, defendant Disney  
 4 MPG nonetheless contracted, either directly or through entities subject to its supervision and control,  
 5 for and used the Contour Assets on at least three major motion pictures *without ever contacting*  
 6 *Rearden.*

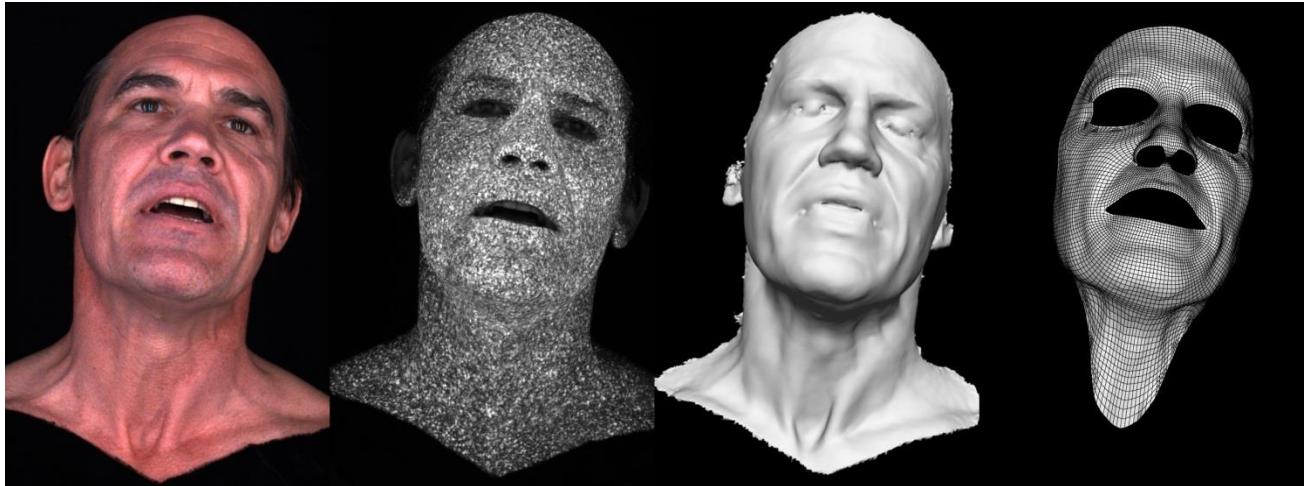
7 **1. *Guardians of the Galaxy***

8 96. *Guardians of the Galaxy* is a motion picture produced by defendant Marvel subject to  
 9 the supervision and control of defendant Disney MPG. At all material times, defendants Disney  
 10 MPG and Marvel were dominated and controlled by defendant Disney Company.

11 97. On information and belief, between February, 2013 and July, 2014, Disney MPG,  
 12 either directly or through an entity subject to its supervision and control, contracted with DD3 to  
 13 provide facial performance capture services and output works made with the patented Contour  
 14 systems and methods and the copyrighted Contour program, including at least the performance of  
 15 actor Josh Brolin as the character Thanos in *Guardians of the Galaxy*.

16 98. Disney MPG, through its employees and agents, reviewed color and grayscale  
 17 Contour output works capturing Brolin's performance and bearing Rearden's copyright notice on the  
 18 first frame. The below images show still frames from Contour output works capturing one of  
 19 Brolin's performances. They are, left to right, one of three Skin Texture output works, one of twenty-  
 20 two Makeup Pattern output works, one Captured Surface output work, and one Tracking Mesh  
 21 output work. *Each of the twenty-five* Skin Texture and Makeup Pattern Contour output works of *each*  
 22 *capture* of Brolin's performance bears Rearden's Contour copyright notice on its first frame. And,  
 23 there were many captures of Brolin's performance. Thus, any review of Brolin's captures would  
 24 have resulted in Disney MPG, through its employees and agents, seeing a vast number of Rearden  
 25 copyright notices, each bearing the year, date, and time of the capture, constantly reminded that

1 Rearden LLC was asserting its copyright in the Contour program and the Contour program works  
2 from the Brolin capture sessions.



11  
12 99. At all material times, DD3 provided Contour facial performance capture services  
13 subject to the terms of its contract with, and subject to the supervision and control of, defendant  
14 Disney MPG. Each time that DD3 operated the Contour system, whether to capture performances or  
15 to process the captured performances into 3D output works, the computers made a copy of the  
16 Contour program in their central processing unit's ("CPU") random access memory ("RAM")  
17 without authorization from Rearden. Disney MPG incorporated the output works of the patented  
18 Contour systems and methods and copyrighted Contour program to animate CG characters that were  
19 reproduced, distributed, displayed, and performed in *Guardians of the Galaxy*. The following  
20 photograph was used by Disney MPG to promote the use of the Contour facial motion capture  
21 technology in the film, followed by a close-up of the Thanos character's face:  
22  
23  
24  
25  
26  
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100. Defendant Disney MPG knew or should have known that the patented Contour systems and methods and copyrighted Contour program were owned by Rearden and/or other Rearden-controlled entities because:

- Disney MPG had been notified that the Contour Assets included at least “patents” and “software.”

- 1       ▪ Disney MPG, through its employees and agents, reviewed color and grayscale Contour
- 2               output works that were consistently and extensively marked with Rearden's Contour
- 3               copyright notice.
- 4       ▪ Disney MPG was notified of the Rearden Demand Letter, which confirmed that Rearden
- 5               employee LaSalle was unlawfully in possession of the Contour Assets. Upon conducting due
- 6               diligence, Disney MPG had dropped out of the running to acquire the Contour Assets.<sup>37</sup>
- 7       ▪ Disney MPG had previously contracted with Rearden and/or its controlled entities to provide
- 8               authorized facial performance capture services and Contour program output works for use in
- 9               *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter*
- 10               (2012), and *The Avengers* (2012) (including defendant Marvel), and had performed
- 11               intellectual property due diligence.
- 12       ▪ Disney MPG performed intellectual property due diligence when it contracted with DD3 to
- 13               provide Contour facial performance capture and output works. Based upon its due diligence,
- 14               Disney MPG knew or should have known that DD3 did not have the right to offer or provide
- 15               facial performance capture services and output works made using the patented Contour
- 16               system and copyrighted Contour program.

17       101. Neither Rearden nor Rearden Mova authorized use of the patented Contour systems  
 18       and methods and copying of the copyrighted Contour program by DD3, defendant Marvel, defendant  
 19       Disney MPG, or any other party in *Guardians of the Galaxy*.

20       102. Defendant Disney MPG released *Guardians of the Galaxy* in domestic theaters on  
 21       July 21, 2014. To date, the film has grossed over \$333 million at the box office in the United States  
 22       and \$773 million globally.<sup>38</sup> It was the third highest-grossing film released in 2014, both  
 23       domestically and worldwide.<sup>39</sup>

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26       <sup>37</sup> *Shenzhensi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt: 383, p. 169, *op. cit.*

27       <sup>38</sup> <http://www.boxofficemojo.com/movies/?id=marvel2014a.htm>.

28       <sup>39</sup> <http://www.boxofficemojo.com/yearly/chart/?yr=2014>,  
<http://www.boxofficemojo.com/alltime/world/>.

1           103. Defendant Buena Vista released *Guardians of the Galaxy* on DVD and Blu-ray, and  
 2 via digital distribution such as download and streaming services in the United States on or about  
 3 December 9, 2014. DVD and Blu-ray sales in the United States exceeded \$131 million. Buena Vista  
 4 also authorized distribution of *Guardians of the Galaxy* across a wide range of other distribution  
 5 means, such as on airplanes, in hotels, through cable and satellite television services, *etc.*

6           **2. *Avengers: Age of Ultron***

7           104. *Avengers: Age of Ultron* is a motion picture produced by defendant Marvel subject to  
 8 the supervision and control of defendant Disney MPG. At all material times, defendants Disney  
 9 MPG and Marvel were dominated and controlled by defendant Disney Company.

10           105. On information and belief, between May 2013 and April 2015, Disney MPG, either  
 11 directly or through an entity subject to its supervision and control, contracted with DD3 to provide  
 12 facial performance capture services and output works made with the patented Contour systems and  
 13 methods and the copyrighted Contour program, including at least Josh Brolin's reprisal of the  
 14 Thanos character.

15           106. Disney MPG, through its employees and agents, reviewed color and grayscale  
 16 Contour output works capturing Brolin's performance and bearing Rearden's copyright notice.

17           107. At all material times, DD3 provided Contour facial performance capture services  
 18 subject to the terms of its contract with, and subject to the supervision and control of, defendant  
 19 Disney MPG. Each time that DD3 operated the Contour system, whether to capture performances or  
 20 to process the captured performances into 3D output works, the computers made a copy of the  
 21 Contour program in their CPU's RAM without authorization from Rearden. Disney MPG  
 22 incorporated the output works of the patented Contour systems and methods and copyrighted  
 23 Contour program to animate CG characters that were reproduced, distributed, displayed, and  
 24 performed including at least the same Thanos CG character from *Guardians of the Galaxy*, appearing  
 25 in the closing credits of *Avengers: Age of Ultron*:



108. Defendant Disney MPG knew or should have known that the patented Contour  
 11 systems and methods and copyrighted Contour program were owned by Rearden and/or other  
 12 Rearden-controlled entities because:

- 13     ▪ Disney MPG had been notified that the Contour Assets included at least “patents” and  
 14         “software.”
- 15     ▪ Disney MPG, through its employees and agents, reviewed color and grayscale Contour  
 16         output works that were consistently and extensively marked with Rearden’s Contour  
 17         copyright notice.
- 18     ▪ Disney MPG was notified of the Rearden Demand Letter, which confirmed that Rearden  
 19         employee LaSalle was unlawfully in possession of the Contour Assets that Disney knew  
 20         included at least “patents” and “software.” Upon conducting due diligence, Disney MPG had  
 21         dropped out of the running to acquire the Contour Assets.<sup>40</sup>
- 22     ▪ Disney MPG had previously contracted with Rearden and/or its controlled entities to provide  
 23         authorized facial performance capture services and Contour program output works for use in  
 24         *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter*  
 25         (2012), and *The Avengers* (2012) (including defendant Marvel), and had performed  
 26         intellectual property due diligence.

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 40 *Shenzhenshi, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt: 383, p. 169, *op. cit.*

1       ■ Disney MPG performed intellectual property due diligence when it contracted with DD3 to  
2       provide Contour facial performance capture and output works. Based upon its due diligence,  
3       Disney MPG knew or should have known that DD3 did not have the right to offer or provide  
4       facial performance capture services and output works made using the patented Contour  
5       system and copyrighted Contour program.

6       109. Neither Rearden nor Rearden Mova authorized use of the patented Contour systems  
7       and methods and copying of the copyrighted Contour program by DD3, defendant Marvel, defendant  
8       Disney MPG, or any other party in *Avengers: Age of Ultron*.

9       110. Defendant Disney MPG released *Avengers: Age of Ultron* in domestic theaters on or  
10      about April 13, 2015. The film has grossed over \$459 million at the box office in the United States,  
11      and over \$1.4 billion worldwide.

12       111. Defendant Buena Vista released *Avengers: Age of Ultron* on DVD and Blu-ray, and  
13      by digital distribution such as download and streaming services on or about October 2, 2015. DVD  
14      and Blu-ray sales in the United States exceed \$79 million. Buena Vista also distributed *Avengers:*  
15      *Age of Ultron* across a wide range of other distribution means, such as on airplanes, in hotels,  
16      through cable and satellite television services, etc.

17       **3.      *Beauty and the Beast***

18       112. *Beauty and the Beast* is a motion picture produced by defendant Disney MPG and  
19      defendant Mandeville Films subject to the supervision and control of defendant Disney MPG. At all  
20      material times, Disney MPG was dominated and controlled by defendant Disney Company.

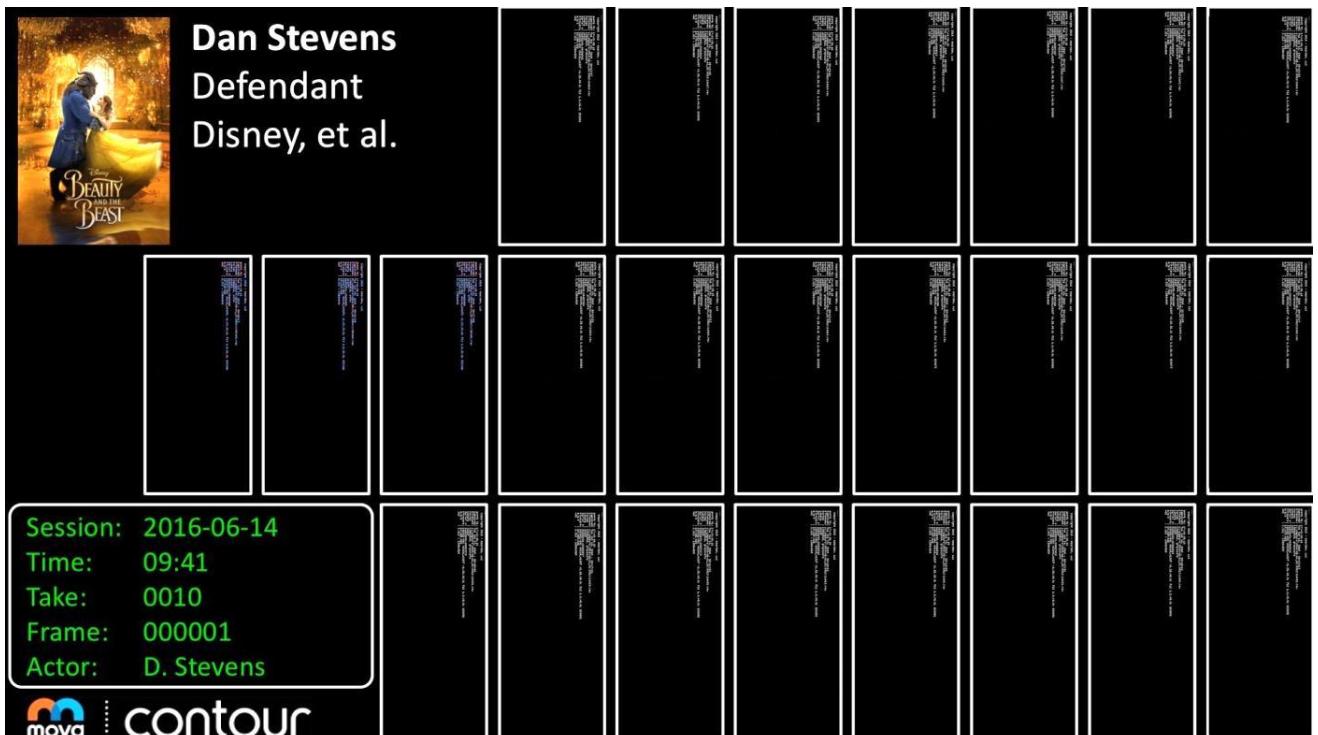
21       113. On information and belief, between February 2013 and March 2017, Disney MPG,  
22      either directly or through an agent, contracted with DD3 to provide facial performance capture  
23      services and products made using the patented Contour system and methods, and copyrighted  
24      Contour program, including at least the performance of actor Dan Stevens as the Beast character.

25       114. Disney MPG, through its employees and agents, reviewed color and grayscale  
26      Contour output works capturing Stevens's performance and bearing Rearden's copyright notice.

1           115. At all material times, DD3 provided Contour facial performance capture services  
 2 subject to the terms of its contract with, and subject to the supervision and control of, defendant  
 3 Disney MPG. Each time that DD3 operated the Contour system, whether to capture performances or  
 4 to process the captured performances into 3D output works, the computers made a copy of the  
 5 Contour program in their CPU's RAM without authorization from Rearden. Disney MPG  
 6 incorporated the output works of the patented Contour systems and methods and copyrighted  
 7 Contour program to animate CG characters that were reproduced, distributed, displayed, and  
 8 performed in *Beauty and the Beast*.

9           116. Defendant Disney MPG knew or should have known that the patented Contour  
 10 systems and methods and copyrighted Contour program were owned by Rearden and/or other  
 11 Rearden-controlled entities because:

- 12           ▪ Disney MPG was notified that the Contour Assets included at least "patents" and "software."
- 13           ▪ Disney MPG, through its employees and agents, reviewed color and grayscale Contour output  
 14           works that were consistently and extensively marked with Rearden's Contour copyright  
 15           notice. For example, the below images shows the Rearden copyright notice of the first frame



1 of twenty-five Contour output works, with one frame enlarged. This is followed by still  
 2 images from the second frame of the twenty-five Contour output works, showing the color  
 3 and grayscale images of the Skin Texture and Makeup Pattern output works.




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<sup>41</sup> *Shenzhen, et al. v. Rearden, et al.*, NDCA Case No. 15-797, Dkt: 383, p. 169, *op. cit.*

- 1     ▪ Disney MPG had previously contracted with Rearden and/or its controlled entities to provide
- 2         authorized facial performance capture services and Contour program output works for use in
- 3         *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter*
- 4         (2012), and *The Avengers* (2012) (including defendant Marvel), and had performed
- 5         intellectual property due diligence.
- 6     ▪ Disney MPG performed intellectual property due diligence when it contracted with DD3 to
- 7         provide Contour facial performance capture and output works. Based upon its due diligence,
- 8         Disney MPG knew or should have known that DD3 did not have the right to offer or provide
- 9         facial performance capture services and output works made using the patented Contour
- 10         system and copyrighted Contour program.

11         117. Neither Rearden nor Rearden Mova authorized use of the patented MOVA Contour  
12         system and methods, and copying of the copyrighted MOVA Contour program by DD3, defendant  
13         Mandeville Films, defendant Disney MPG, or any other party in *Beauty and the Beast*.

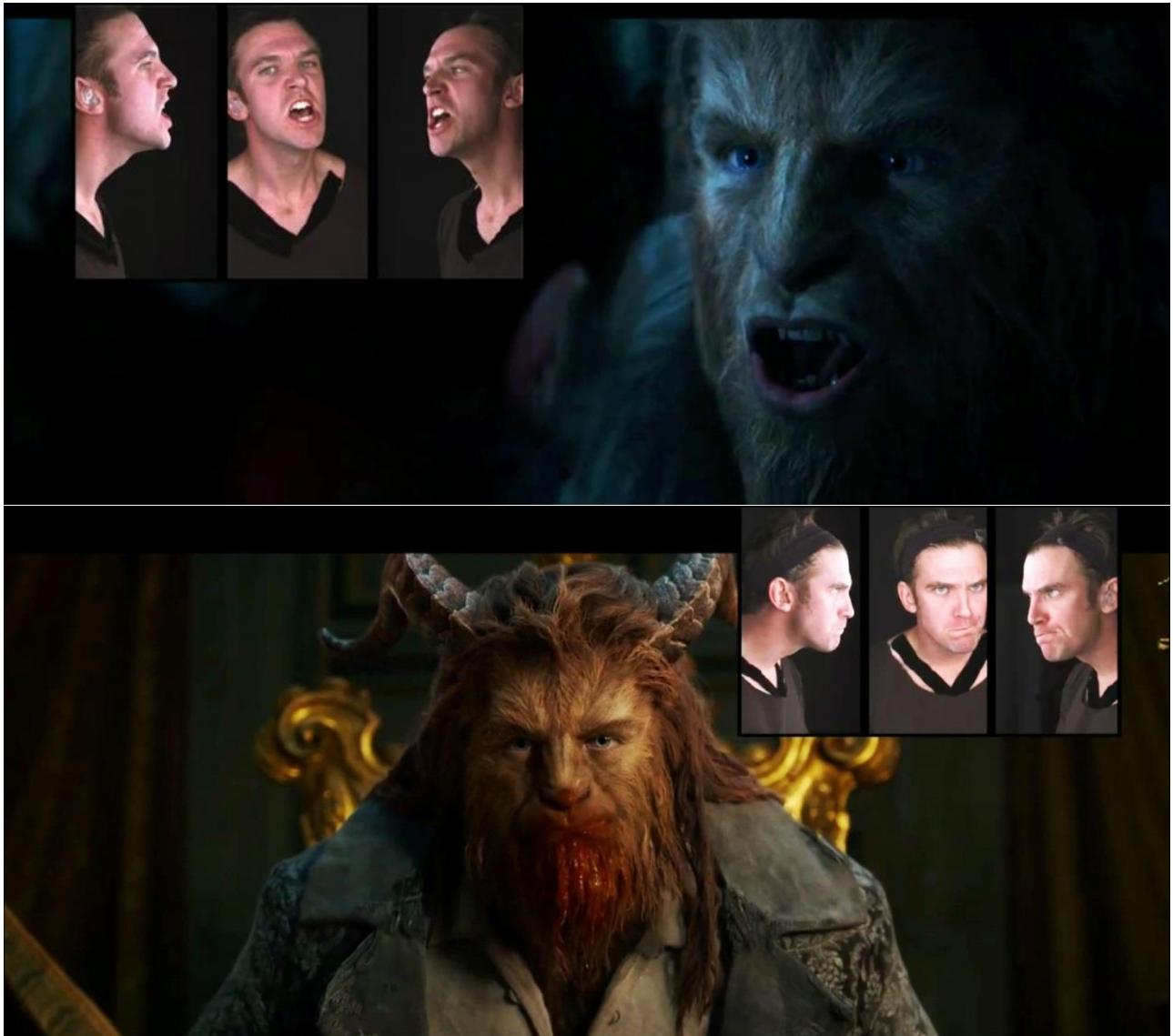
14         118. The photograph below is a still from a video clip in the “*Beauty of a Tale*” featurette,  
15         distributed with versions of the *Beauty and the Beast* Blu-ray and through other digital distribution,  
16         which shows three views of Beast actor Dan Stevens in the stolen Contour apparatus. A clapperboard  
17         in front of his face shows that a facial performance is about to begin. The middle image shows the  
18         clapperboard from the front with Mr. Stevens’ forehead visible behind it, the left image shows a side  
19         view from left of Mr. Stevens’ face and the left side of the clapperboard, and the right image shows a  
20         side view from the right of Mr. Stevens’ face and part of the right side of the clapperboard:



12 Mr. Stevens' face had phosphor-based makeup applied to it, which made his face appear to human  
13 observers or conventional cameras as having a blue glow. The reason Mr. Stevens' face appears in  
14 these three images in its natural skin color, without blue glow, is because these images are not from  
15 conventional cameras. They are Contour program Skin Texture output works. But for the MOVA  
16 Contour system and methods and the copyrighted Contour program, it would not be possible to  
17 capture and record Mr. Stevens's natural skin color. Each of these three Contour program Skin  
18 Texture output works originally had a Rearden LLC copyright notice shown in the first frame.  
19 Disney MPG, through its agents and employees, removed each frame with a Rearden LLC copyright  
20 notice in the Contour program output works shown in the "Beauty of a Tale" featurette. While  
21 Disney MPG was thorough in erasing all of Rearden's many Contour copyright notices, it was  
22 equally thorough in making sure its own copyright notices were prominently displayed.

23 119. The two photographs below are stills from a video clip in the "*Beauty of a Tale*"  
24 featurette that shows three Skin Texture output works from Contour systems and methods and the  
25 copyrighted Contour program. As detailed in the previous paragraph, to human observers and  
26 conventional cameras, Mr. Stevens' natural skin color would not be visible, but rather he would  
27 appear as having a blue glow covering his entire face and surrounding skin areas. Once again,  
28

1 Disney MPG removed all of Rearden LLC's many copyright notices, while prominently showing its  
2 own copyright notices.



21 120. The CG image of the Beast above is a retargeting of a Contour Tracking Mesh output  
22 work. The Captured Surface and Skin Texture output works were likely also used. For example, the  
23 Skin Texture could be used to locate Mr. Stevens's "eyelines" (the direction his eyes are looking),  
24 the look of his eyes and the look of his teeth and tongue when his mouth is open. The Makeup  
25 Pattern and other Contour program output works may have also been used. For example, Contour  
26 program output works include frame timing files used to synchronize Mr. Stevens's utterances (e.g.  
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1 dialog lines and roars) with his facial motion. These images are examples of retargeting to a CG 3D  
2 model. A CG 3D model of the Beast's face and head was created and, but for the retargeting from  
3 the Contour program output works, would be immobile and expressionless. But the Contour program  
4 output works retargeted to the CG 3D model brought the Beast's face to life, retaining the  
5 expressiveness, subtlety, and humanity of Mr. Stevens's performance in the CG 3D model. Again,  
6 Disney MPG removed all of Rearden LLC's many copyright notices, while prominently showing its  
7 own copyright notices.

8 121. The photograph below is a still from the "*Beauty of a Tale*" featurette that shows in  
9 the lower left Mr. Stevens performing on set in a scene, and the upper left image shows the Skin  
10 Texture output file of Mr. Stevens re-performing the facial motions of the same scene in the stolen  
11 Contour apparatus. On the right, the CG 3D model of the Beast is shown separately from the body.  
12 As described previously, the Tracking Mesh output work, and likely other Contour output works,  
13 retargeted to the 3D model of the Beast's face, bring the CG 3D model of the Beast to life, while  
14 retaining the expressiveness, subtlety and humanity of Mr. Stevens's performance. Again, Disney  
15 MPG removed all of Rearden many copyright notices, while prominently showing its own copyright  
16 notices.



122. The *still* images of video clips in the prior three photographs do not convey the extraordinary results achieved *in motion*, showing the expressiveness, subtlety and humanity achieved from the Contour system and methods and the copyrighted Contour program. The video clip sources for the above stills can be found in the “*Beauty of a Tale*” promotional video Disney provided to USA Today, which can be viewed here:

<https://www.usatoday.com/story/life/entertainthis/2017/05/29/exclusive-video-how-dan-stevens-was-transformed-in-beauty-and-the-beast/102281138/>

123. Defendant Disney MPG released *Beauty and the Beast* in domestic theaters on or about March 17, 2017. The film has grossed over \$500 million at the box office in the United States, and over \$1.25 billion globally<sup>42</sup>.

124. Defendant Buena Vista released *Beauty and the Beast* on DVD and Blu-ray, and via digital distribution such as download and streaming services on or about June 6, 2017. Many of the DVD, Blu-ray and digitally distributed versions of *Beauty and the Beast* included the Bonus Featurette entitled “*A Beauty of a Tale*” that showed how the Contour system was used in the creation of the Beast, including Contour program output works. Disney also distributed “*Beauty of a Tale*” showing how Contour was used, including Contour program output works as a promotion for the DVD, Blu-ray, and digital distribution release on USA Today’s website, where it is publicly available for streaming over the Internet.<sup>43</sup> Disney has earned over many millions of dollars from DVD, Blu-ray, and digital distribution as of the date of this complaint. Buena Vista also distributed *Beauty and the Beast* across a wide range of other distribution means, such as on airplanes, in hotels, through cable and satellite television services.

**FIRST CAUSE OF ACTION:  
VICARIOUS AND CONTRIBUTORY COPYRIGHT INFRINGEMENT  
(DEFENDANTS DISNEY COMPANY, DISNEY MPG, AND MARVEL)**

125. Plaintiffs reallege and incorporate each and every allegation contained in the paragraphs above with the same force and effect as if they were fully set forth here.

<sup>42</sup> <http://www.boxofficemojo.com/movies/?id=beautyandthebeast2017.htm>.

<sup>43</sup> Truitt, *op. cit.*

## *Rearden's Copyright in the Contour Program.*

126. The Contour program is an original literary work of authorship by Rearden-employed programmers.

127. The Contour program was fixed in a tangible medium of expression when it was stored in non-volatile computer memory and/or media such as computer hard drives, CD, CD-R, DVD, or Blu-ray disks from which it may be perceived, reproduced, or otherwise communicated for a period of more than transitory duration. Accordingly, the Contour program is a proper subject of copyright protection.

128. Rearden's programmers duly assigned their copyrights in the Contour program to Rearden. At all material times, Plaintiff Rearden Mova was and is the owner of United States Copyright Registration No. TXu001977151 for the Contour program.

### ***DD3's Direct Infringement of Rearden's Copyright.***

129. Each time that DD3 operated the Contour apparatus, whether for facial performance capture or for processing captures into output works, the computers made an unauthorized copy of the Contour program in their central processing unit's ("CPU") random access memory ("RAM"). Each such copy is a violation of Rearden's exclusive right to authorize copies of its Contour program under 17 U.S.C. § 106 (1), and therefore each copy is an act of direct copyright infringement by DD3.

### ***Defendants' Vicarious Liability for DD3's Infringement<sup>44</sup>***

130. Defendant Disney MPG, either directly or through entities subject to its direction and control such as Marvel, contracted with DD3 for facial performance capture services and output works using the Contour program for Disney MPG's films *Guardians of the Galaxy* and *Avengers: Age of Ultron*. At all material times during DD3's performance of the facial performance capture contract, Disney MPG and Marvel were in a position to police DD3 and/or had the right and ability to supervise and control DD3's performance.

<sup>44</sup> See, e.g., *Oracle America, Inc. v. Hewlett Packard Enterprise Co.*, 2017 WL 2672113, \*2-3 (N.D. Cal. Jan. 19, 2017).

1           131. Disney MPG, either directly or through entities subject to its direction and control  
 2 such as Marvel, initiated and scheduled each facial performance capture session with DD3 using the  
 3 Contour program.

4           132. For each session, Disney MPG, either directly or through entities subject to its  
 5 direction and control such as Marvel, supplied performers to provide facial performances for capture  
 6 by DD3 using the Contour program.

7           133. For each session, Disney MPG, either directly or through entities subject to its  
 8 direction and control such as Marvel, supplied a director to control and direct the actions of DD3 in  
 9 providing facial performance capture using the Contour program. Acting as Disney MPG's  
 10 supervising agent, the director controlled and directed DD3's use of the Contour program by starting  
 11 and terminating each session, starting and stopping each take, ordering DD3 to provide additional  
 12 takes, and choosing "Selects" (the Contour capture takes which were deemed "good takes" by the  
 13 director) for further Contour program processing to create Captured Surface and Tracking Mesh  
 14 output works, all using the Contour program. So extensive is Disney MPG's directors' supervision  
 15 and control over the facial motion capture sessions performed by DD3, that defendants contend that  
 16 the directors' contribution "is substantial and performs 'the lion's share of the creativity' in the facial  
 17 motion capture," and that consequently the directors are the authors of the results of the facial motion  
 18 capture.<sup>45</sup>

19           134. For each session, Disney MPG, either directly or through entities subject to its  
 20 direction and control, provided various film crew to support and facilitate DD3's facial performance  
 21 capture using the Contour program. Disney MPG relied on the presence of a clapperboard operated  
 22 by defendants' film crew in images in the original complaint to show that the facial performance  
 23 sessions were superintended and directed by persons provided by Disney MPG, either directly or  
 24 through entities subject to its direction and control.<sup>46</sup>

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 27           <sup>45</sup> See, e.g., Dkt. 36 at 8:16-18; 6:13-16.  
 28           <sup>46</sup> Id. at 8:4-15.

1           135. Disney MPG, either directly or through entities subject to its direction and control,  
 2 received from DD3 and reviewed numerous Contour program output works bearing the Rearden  
 3 Contour copyright notice.

4           136. After reviewing the Contour program output works from Contour capture takes,  
 5 Disney MPG, or entities subject to its direction and control such as Marvel, chose specific Contour  
 6 program output works and designated them as “Selects,” and caused DD3 to use the Contour  
 7 program to further process the Selects to create new output works that were used to animate CG  
 8 characters in *Guardians of the Galaxy* and *Avengers: Age of Ultron*, including at least the Thanos  
 9 character.

10          137. On information and belief, the contract between DD3 and Disney MPG, or entities  
 11 subject to its direction and control such as Marvel, grants the unrestricted right to cancel “any portion  
 12 of the Services” provided by DD3, subject only to the duty to pay for costs and services performed  
 13 before cancellation. Accordingly, Disney MPG, either directly or through entities subject to its  
 14 direction and control such as Marvel, were in a position to police DD3’s infringing acts. They had  
 15 the authority and practical ability to observe and evaluate services provided by DD3 and—if  
 16 defendants deemed those services inadequate, improper, or unlawful—require DD3 to remedy the  
 17 services or cancel DD3’s provision of services.

18          138. Defendants Disney MPG and Marvel had an obvious and direct financial interest in  
 19 exploitation of Rearden’s copyright in the Contour program to use the Contour output works to  
 20 animate CG characters in *Guardians of the Galaxy* and *Avengers: Age of Ultron*, including at least  
 21 the Thanos character. Disney MPG and Marvel believed that Contour facial performance motion  
 22 capture would make the Thanos CG character more believable and compelling, which would in turn  
 23 draw a wider audience to the films.

24          139. At all material times, defendant Disney dominated and controlled defendants Disney  
 25 MPG and Marvel, and had a substantial and continuing connection with them with respect to the  
 26 infringing acts alleged herein.

1           140. Accordingly, defendants induced each of DD3's direct infringements of Rearden's  
 2 copyright in the Contour program during its performance of the *Guardians of the Galaxy* and  
 3 *Avengers: Age of Ultron* facial performance capture contracts, and are vicariously liable to Rearden  
 4 for each of DD3's direct infringements.

5           ***Defendants' Contributory Copyright Infringement<sup>47</sup>***

6           141. Disney MPG and Marvel had actual knowledge of DD3's specific acts of  
 7 infringement, and induced, caused, and materially contributed to DD3's infringement.

8           142. Disney MPG, either directly or through entities subject to its direction and control  
 9 such as Marvel, contracted with DD3 for facial performance capture services and output works using  
 10 the Contour program for Disney MPG's films *Guardians of the Galaxy* and *Avengers: Age of Ultron*.

11           143. Disney MPG, either directly or through entities subject to its direction and control  
 12 such as Marvel, initiated and scheduled each facial performance capture session with DD3 using the  
 13 Contour program.

14           144. Each of the requests for facial performance captures caused DD3 to use the Contour  
 15 program, which created an infringing copy of the program for non-transitory duration in the RAM of  
 16 Contour system computers.

17           145. For each session, Disney MPG, either directly or through entities subject to its  
 18 direction and control such as Marvel, supplied performers to provide facial performances for capture  
 19 by DD3 using the Contour program.

20           146. For each session, Disney MPG, either directly or through entities subject to its  
 21 direction and control such as Marvel, supplied a director to control and direct the actions of DD3 in  
 22 providing facial performance capture using the Contour program. Acting as Disney MPG's  
 23 supervising agent, the director controlled and directed DD3's use of the Contour program by starting  
 24 and terminating each session, starting and stopping each take, ordering DD3 to provide additional  
 25 takes, and choosing "Selects" (the Contour capture takes which were deemed "good takes" by the

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<sup>47</sup> See, e.g., *Oracle America, Inc. v. Hewlett Packard Enterprise Co.*, 2016 WL 3951653, \*5-6  
 28 (N.D. Cal. July 22, 2016)

1 director) for further Contour program processing to create Captured Surface and Tracking Mesh  
 2 output works, all using the Contour program. So extensive is Disney MPG's directors' supervision  
 3 and control over the facial motion capture sessions performed by DD3, that defendants contend that  
 4 the directors' contribution "is substantial and performs 'the lion's share of the creativity' in the facial  
 5 motion capture," and that consequently the directors are the authors of the results of the facial motion  
 6 capture.<sup>48</sup>

7 147. For each session, Disney MPG, either directly or through entities subject to its  
 8 direction and control, provided various film crew to support and facilitate DD3's facial performance  
 9 capture using the Contour program. Disney MPG relied on the presence of a clapperboard operated  
 10 by defendants' film crew in images in the original complaint to show that the facial performance  
 11 sessions were superintended and directed by persons provided by Disney MPG, either directly or  
 12 through entities subject to its direction and control.<sup>49</sup>

13 148. Disney MPG, either directly or through entities subject to its direction and control,  
 14 received from DD3 and reviewed numerous Contour program output works bearing the Rearden  
 15 Contour copyright notice.

16 149. After reviewing the Contour program output works from the Contour capture takes,  
 17 Disney MPG, either directly or through entities subject to its direction and control, chose specific  
 18 Contour works and designated them as "Selects," and caused DD3 to use the Contour program to  
 19 further process the Selects to create new output works that were used to animate CG characters in  
 20 *Guardians of the Galaxy* and *Avengers: Age of Ultron*, including at least the Thanos character.

21 150. Each of defendants' requests for further processing of defendants' selected Contour  
 22 output works caused DD3 to use the Contour program, which created an infringing copy of the  
 23 program for non-transitory duration in the RAM of Contour system computers.

24 151. On information and belief, the contract between DD3 and Disney MPG, or entities  
 25 subject to its direction and control, grants defendants the unrestricted right to cancel "any portion of

27 <sup>48</sup> See, e.g., Dkt. 36 at 8:16-18; 6:13-16.  
 28 <sup>49</sup> Id. at 8:4-15.

1 the Services" provided by DD3, subject only to the duty to pay for costs and services performed  
 2 before cancellation. Accordingly, defendants were in a position to police DD3's infringing acts.  
 3 They had the authority and practical ability to observe and evaluate services provided by DD3 and—  
 4 if defendants deemed those services inadequate, improper, or unlawful—require DD3 to remedy the  
 5 services or cancel DD3's provision of services to defendants but declined to exercise that right.

6 152. At all material times, defendant Disney dominated and controlled defendants Disney  
 7 MPG and Marvel, and had a substantial and continuing connection with them with respect to the  
 8 infringing acts alleged herein.

9 153. Accordingly, defendants are contributory infringers of Rearden's copyright in the  
 10 Contour program, and are liable to Rearden for each of DD3's direct infringements.

11 154. The acts of vicarious and/or contributory copyright infringement by defendants were,  
 12 and are, willful, intentional, purposeful, and knowing, in that defendants at all material times had  
 13 actual knowledge that the copyright in the Contour program has been, and is, owned by Rearden, or  
 14 were in reckless disregard of or willfully blind to Rearden's copyright, and defendants have acted in  
 15 knowing disregard of and indifference to Rearden's rights.

16 155. Rearden has been harmed as the direct and proximate result of the foregoing acts of  
 17 copyright infringement. Plaintiffs are entitled to actual damages, profits of the infringers, and all  
 18 such other remedies as may be available under the Copyright Act.

19 **SECOND CAUSE OF ACTION:**  
 20 **VICARIOUS AND CONTRIBUTORY COPYRIGHT INFRINGEMENT**  
 21 **(DEFENDANTS DISNEY COMPANY, DISNEY MPG,**  
 22 **AND MANDEVILLE)**

23 156. Plaintiffs reallege and incorporate each and every allegation contained in the  
 24 paragraphs above with the same force and effect as if they were fully set forth here.

25 ***Rearden's Copyright in the Contour Program***

26 157. The Contour program is an original literary work of authorship by Rearden-employed  
 27 programmers.

28 158. The Contour program was fixed in a tangible medium of expression when it was  
 stored in non-volatile computer memory and/or media such as computer hard drives, CD, CD-R,

1 DVD, or Blu-ray disks from which it may be perceived, reproduced, or otherwise communicated for  
 2 a period of more than transitory duration. Accordingly, the Contour program is a proper subject of  
 3 copyright protection.

4 159. Rearden's programmers duly assigned their copyrights in the Contour program to  
 5 Rearden. At all material times, Plaintiff Rearden Mova was and is the owner of United States  
 6 Copyright Registration No. TXu001977151 for the Contour program.

7 ***DD3's Direct Infringement of Rearden's Copyright***

8 160. Each time that DD3 operated the Contour apparatus, the computers made an  
 9 unauthorized copy of the Contour program in their central processing unit's ("CPU") random access  
 10 memory ("RAM"). Each such copy is a violation of Rearden's exclusive right to authorize copies of  
 11 its Contour program under 17 U.S.C. § 106 (1), and therefore each copy is an act of direct copyright  
 12 infringement by DD3.

13 ***Defendants' Vicarious Liability for DD3's Copyright Infringement<sup>50</sup>***

14 161. Defendant Disney MPG, either directly or through entities subject to its direction and  
 15 control such as Mandeville, contracted with DD3 to provide facial performance capture services and  
 16 output works using the Contour program for Disney MPG's film *Beauty and the Beast*. At all  
 17 material times during DD3's performance of the facial performance capture contract, Disney MPG  
 18 and Mandeville were in a position to police DD3 and/or had the right and ability to supervise and  
 19 control DD3's performance.

20 162. Disney MPG, either directly or through entities subject to its direction and control  
 21 such as Mandeville, initiated and scheduled each facial performance capture session with DD3 using  
 22 the Contour program.

23 163. For each session, Disney MPG, either directly or through entities subject to its  
 24 direction and control such as Mandeville, supplied performers to provide facial performances for  
 25 capture by DD3 using the Contour program.

26  
 27 <sup>50</sup> See, e.g., *Oracle America, Inc. v. Hewlett Packard Enterprise Co.*, 2017 WL 2672113, \*2-3  
 28 (N.D. Cal. Jan. 19, 2017).

1           164. For each session, Disney MPG, either directly or through entities subject to its  
 2 direction and control such as Mandeville, supplied a director to control and direct the actions of DD3  
 3 in providing facial performance capture using the Contour program. Acting as Disney MPG's  
 4 supervising agent, the director controlled and directed DD3's use of the Contour program by starting  
 5 and terminating each session, starting and stopping each take, ordering DD3 to provide additional  
 6 takes, and choosing "Selects" (the Contour capture takes which were deemed "good takes" by the  
 7 director) for further Contour program processing to create Captured Surface and Tracking Mesh  
 8 output works, all using the Contour program. So extensive is Disney MPG's directors' supervision  
 9 and control over the facial motion capture sessions performed by DD3, that defendants contend that  
 10 the directors' contribution "is substantial and performs 'the lion's share of the creativity' in the facial  
 11 motion capture," and that consequently the directors are the authors of the results of the facial motion  
 12 capture.<sup>51</sup>

13           165. For each session, Disney MPG, either directly or through entities subject to its  
 14 direction and control, provided various film crew to support and facilitate DD3's facial performance  
 15 capture using the Contour program. Disney MPG relied on the presence of a clapperboard operated  
 16 by defendants' film crew in images in the original complaint to show that the facial performance  
 17 sessions were superintended and directed by persons provided by Disney MPG, either directly or  
 18 through entities subject to its direction and control.<sup>52</sup>

19           166. Disney MPG, either directly or through entities subject to its direction and control  
 20 such as Mandeville, received from DD3 and reviewed numerous Contour program output works  
 21 bearing the Rearden Contour copyright notice.

22           167. After reviewing the Contour program output works from Contour capture takes,  
 23 Disney MPG, either directly or through entities subject to its direction and control such as  
 24 Mandeville, chose specific Contour works and designated them as Selects, and caused DD3 to use  
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27           <sup>51</sup> See, e.g., Dkt. 36 at 8:16-18; 6:13-16.  
 28           <sup>52</sup> Id. at 8:4-15.

1 the Contour program to further process the Selects to create new output works that were used to  
 2 animate CG characters in *Beauty and the Beast*, including at least the Beast character.

3       168. On information and belief, the contract between DD3 and Disney MPG, or entities  
 4 subject to its direction and control such as Mandeville, grants the unrestricted right to cancel “any  
 5 portion of the Services” provided by DD3, subject only to the duty to pay for costs and services  
 6 performed before cancellation. Accordingly, Disney MPG, either directly or through entities subject  
 7 to its direction and control such as Mandeville, were in a position to police DD3’s infringing acts.  
 8 They had the authority and practical ability to observe and evaluate services provided by DD3 and—  
 9 if defendants deemed those services inadequate, improper, or unlawful—require DD3 to remedy the  
 10 services or cancel DD3’s provision of services.

11       169. Defendant Disney MPG and Mandeville had an obvious and direct financial interest  
 12 in exploitation of Rearden’s copyright in the Contour program to use the Contour output works to  
 13 animate CG characters in *Beauty and the Beast*, including at least the romantic lead character Beast.  
 14 Disney MPG and Mandeville regarded the Contour program’s faithful tracking of Dan Stevens’s  
 15 performance as critical to the believability of the CG Beast character to film-goers, and thus would  
 16 draw a wider audience to the film.

17       170. At all material times, defendant Disney dominated and controlled defendants Disney  
 18 MPG and Mandeville, and had a substantial and continuing connection with them with respect to the  
 19 infringing acts alleged herein.

20       171. Accordingly, defendants induced each of DD3’s direct infringements of Rearden’s  
 21 copyright in the Contour program during the *Beauty and the Beast* contract, and are vicariously liable  
 22 to Rearden for each of DD3’s direct infringements.

23       ***Defendants’ Contributory Copyright Infringement<sup>53</sup>***

24       172. Disney MPG and Mandeville had actual knowledge of DD3’s specific acts of  
 25 infringement, and induced, caused, and materially contributed to DD3’s infringement.

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27       <sup>53</sup> See, e.g., *Oracle America, Inc. v. Hewlett Packard Enterprise Co.*, 2016 WL 3951653, \*5-6  
 28 (N.D. Cal. July 22, 2016)

1           173. Disney MPG, either directly or through entities subject to its direction and control  
 2 such as Mandeville, contracted with DD3 for facial performance capture services and output works  
 3 using the Contour program for Disney MPG's films *Guardians of the Galaxy* and *Avengers: Age of*  
 4 *Ultron*.

5           174. Disney MPG, either directly or through entities subject to its direction and control  
 6 such as Mandeville, initiated and scheduled each facial performance capture session with DD3 using  
 7 the Contour program.

8           175. Each of the requests for facial performance captures caused DD3 to use the Contour  
 9 program, which created an infringing copy of the program for non-transitory duration in the RAM of  
 10 Contour system computers.

11           176. For each session, Disney MPG, either directly or through entities subject to its  
 12 direction and control such as Mandeville, supplied performers to provide facial performances for  
 13 capture by DD3 using the Contour program.

14           177. For each session, Disney MPG, either directly or through entities subject to its  
 15 direction and control such as Mandeville, supplied a director to control and direct the actions of DD3  
 16 in providing facial performance capture using the Contour system and methods. Acting as Disney  
 17 MPG's supervising agent, the director controlled and directed DD3's use of the Contour system and  
 18 methods by starting and terminating each session, starting and stopping each take, ordering DD3 to  
 19 provide additional takes, and choosing "Selects" (the Contour capture takes which were deemed  
 20 "good takes" by the director) for further Contour program processing to create Captured Surface and  
 21 Tracking Mesh output works, all using the Contour system and methods to capture the performer's  
 22 facial performance. So extensive is Disney MPG's directors' supervision and control over the facial  
 23 motion capture sessions performed by DD3, that defendants contend that the directors' contribution  
 24 "is substantial and performs 'the lion's share of the creativity' in the facial motion capture," and that  
 25 consequently the directors are the authors of the results of the facial motion capture.<sup>54</sup>

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<sup>54</sup> See, e.g., Dkt. 36 at 8:16-18; 6:13-16.

1           178. For each session, Disney MPG, either directly or through entities subject to its  
 2 direction and control, provided various film crew to support and facilitate DD3's facial performance  
 3 capture. Disney MPG relied on the presence of a clapperboard operated by defendants' film crew in  
 4 images in the original complaint to show that the facial performance sessions were superintended and  
 5 directed by persons provided by Disney MPG, either directly or through entities subject to its  
 6 direction and control.<sup>55</sup>

7           179. Disney MPG, either directly or through entities subject to its direction and control  
 8 such as Mandeville, received from DD3 and reviewed numerous Contour program output works  
 9 bearing the Rearden Contour copyright notice.

10          180. After reviewing the Contour program output works from Contour capture takes,  
 11 Disney MPG, either directly or through entities subject to its direction and control such as  
 12 Mandeville, chose specific Contour works and designated them as "Selects," and caused DD3 to use  
 13 the Contour program to further process the Selects to create new output works that were used to  
 14 animate CG characters in *Guardians of the Galaxy* and *Avengers: Age of Ultron*, including at least  
 15 the Thanos character.

16          181. Each of defendants' requests for further processing of defendants' selected Contour  
 17 output works caused DD3 to use the Contour program, which created an infringing copy of the  
 18 program for non-transitory duration in the RAM of Contour system computers.<sup>181</sup>       On  
 19 information and belief, the contract between DD3 and Disney MPG, or entities subject to its  
 20 direction and control, grants defendants the unrestricted right to cancel "any portion of the Services"  
 21 provided by DD3, subject only to the duty to pay for costs and services performed before  
 22 cancellation. Accordingly, defendants were in a position to police DD3's infringing acts. They had  
 23 the authority and practical ability to observe and evaluate services provided by DD3 and—if  
 24 defendants deemed those services inadequate, improper, or unlawful—require DD3 to remedy the  
 25 services or cancel DD3's provision of services to defendants but declined to exercise that right.

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<sup>55</sup> *Id.* at 8:4-15.

182. At all material times, defendant Disney dominated and controlled defendants Disney MPG and Mandeville, and had a substantial and continuing connection with them with respect to the infringing acts alleged herein.

183. Accordingly, Defendants are contributory infringers of Rearden's copyright in the Contour program, and are liable to Rearden for each of DD3's direct infringements.

184. The acts of vicarious and/or contributory copyright infringement by defendants were, and are, willful, intentional, purposeful and knowing, in that defendants at all material times had actual knowledge that the copyright in the Contour program has been, and is, owned by Rearden, or were in reckless disregard of or willfully blind to Rearden copyrights, and defendants have acted in knowing disregard of and indifference to the Rearden's rights.

185. Rearden has been harmed as the direct and proximate result of the foregoing acts of copyright infringement. Plaintiffs are entitled to actual damages, profits of the infringers, and all such other remedies as may be available under the Copyright Act.

**THIRD CAUSE OF ACTION:  
DIRECT AND ACTIVELY-INDUCED INFRINGEMENT OF U.S. PATENT NO. 7,605,861  
(DEFENDANT DISNEY MPG)**

186. Plaintiffs reallege and incorporate each and every allegation contained in the paragraphs above with the same force and effect as if they were fully set forth here.

187. Plaintiff Rearden Mova LLC is the owner by assignment of U.S. Patent No. 7,605,861 (the '861 Patent), entitled "Apparatus and Method for Performing Motion Capture Using Shutter Synchronization," issued on October 20, 2009.

188. The '861 Patent generally teaches a system and methods of performing motion capture using shutter synchronization and/or using phosphor-based paint. For example, a method for mixing phosphor-based makeup with a makeup base, applying the mixture on surface regions of a motion capture subject, strobing a light source on and off, and strobing camera shutters synchronously with the strobing light source to perform motion capture.

1           189. The Contour facial motion capture apparatus and methods, which were conceived and  
 2 developed by Rearden, and taken, offered and used by DD3, are commercial embodiments of the  
 3 systems and methods claimed in the '861 Patent.

4           190. By way of example, and not limitation, claim 1 of the '861 Patent recites the  
 5 following limitations:

6                   A method comprising:

7                           applying phosphorescent paint to regions of a performer's face  
 8 and/or body;

9                           strobing a light source on and off, the light source charging the  
 10 phosphorescent paint when on; and

11                           strobing the shutters of a first plurality of cameras synchronously  
 12 with the strobing of the light source to capture sequences of images  
 13 of the phosphorescent paint ("glow frames") as the performer  
 14 moves or changes facial expressions during a performance,  
 15 wherein the shutters are open when the light source is off and the  
 16 shutters are closed when the light source is on.

17           191. The Contour facial motion capture method includes a step in which phosphor-based  
 18 paint is applied to regions of a performer's face.

19           192. The Contour facial motion capture method has white and ultraviolet light sources.  
 20 The white light source is alternately strobed on and off, charging the phosphor-based paint when on.

21           193. The Contour facial motion capture technology includes a step in which cameras with  
 22 shutters controlled by computers and the Contour computer program, which open and close  
 23 synchronously (strobing). The shutters open when the white light sources are off and the ultraviolet  
 24 light sources are on, thereby capturing sequences of images of the phosphor-based paint ("glow  
 25 frames") as the performer changes facial expressions during a performance.

26                   ***Disney MPG's Direct Infringement under 35 U.S.C. 271(a)***

27           194. Defendant Disney MPG, acting either alone or through entities subject to its  
 28 supervision and control, became a customer of DD3 when it subscribed by contract with DD3 to  
 receive facial performance motion capture services and output works using the Contour system and  
 methods in its *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* films.

1           195. On information and belief, the contract between DD3 and Disney MPG, either  
 2 directly or through entities subject to Disney MPG's supervision and control, was a "Facility Use and  
 3 Services Agreement" in which DD3 authorized defendant and its employees, agents, subcontractors,  
 4 and permittees "to use designated portions of the Playa Facility [DD3's studios] in connection with  
 5 the Shoot, subject to supervision by any DD3 employees which DD3 may deem appropriate." It  
 6 requires DD3 to provide designated services at the facility.

7           196. On information and belief, the contract grants Disney MPG, either directly or through  
 8 entities subject to Disney MPG's supervision and control, the unrestricted right to cancel "any  
 9 portion of the Services" provided by DD3, subject only to the duty to pay for costs and services  
 10 performed before cancellation.

11           197. Pursuant to its contract with Disney MPG, either directly or through entities subject to  
 12 Disney MPG's supervision and control, DD3 provided facial performance motion capture services  
 13 and output works using the Contour system and methods to Disney MPG on-demand.

14           198. On information and belief, Disney MPG, either directly or through entities subject to  
 15 Disney MPG's supervision and control, transmitted a request to DD3 to initiate and schedule each  
 16 facial performance capture session using the Contour system and methods.

17           199. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 18 entities subject to its supervision and control, supplied performers to provide facial performances for  
 19 capture by DD3 using the Contour system and methods.

20           200. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 21 entities subject to its supervision and control, supplied a director to control and direct the actions of  
 22 DD3 in providing facial performance capture using the Contour system and methods. Acting as  
 23 Disney MPG's supervising agent, the director controlled and directed DD3's use of the Contour  
 24 system and methods by starting and terminating each session, starting and stopping each take,  
 25 ordering DD3 to provide additional takes, and choosing "selects" (the Contour capture takes which  
 26 were deemed "good takes" by the director) for further Contour program processing to create

1      Captured Surface and Tracking Mesh output works, all using the Contour system and methods to  
 2      capture the performer's facial performance.

3            201. After completion of each facial performance capture using the Contour system and  
 4      methods, Disney MPG, either directly or through entities subject to its supervision and control,  
 5      caused DD3 to use the Contour system and methods to process the captures into various output  
 6      works in performance of its facial performance capture contract. DD3 generated Contour output  
 7      works and made them available to Disney MPG, either directly or to entities subject to Disney  
 8      MPG's supervision and control, subject to the terms of the facial performance capture contract.

9            202. Disney MPG's on-demand operation of the Contour system and methods is a "use" of  
 10     the Contour system and methods under 35 U.S.C. § 271(a) because Disney MPG puts the Contour  
 11     system and methods as a whole into service, *i.e.*, controls the system by initiating and scheduling  
 12     each session, providing the performer to serve as subject, providing a director to supervise and  
 13     control DD3's provision of facial performance capture services using the Contour system and  
 14     methods, choosing "selects" for further Contour program processing, and contracting for output  
 15     works generated by DD3's operation of the Contour system and methods. But for the actions of  
 16     Disney MPG or entities subject to its supervision and control, the entire Contour system would never  
 17     have been put into service in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the*  
 18     *Beast*.

19            203. Disney MPG obtained benefit from DD3's operation of the Contour system and  
 20     methods because it received Contour program output works that it used to animate CG characters  
 21     that appeared in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*, and  
 22     whose appearance was more realistic and compelling than was possible using the output of other  
 23     performance capture technologies.

24            204. Therefore, Disney MPG directly infringed the '861 patent by using the claimed  
 25     systems and methods without authorization.

26            ***Disney MPG's Active Inducement of DD3's Direct Infringement Under 35 U.S.C. § 271(b)***

1           205. Defendant Disney MPG, acting either alone or through entities subject to its  
 2 supervision and control, contracted with DD3 to use the patented Contour facial motion capture  
 3 system and methods for facial motion capture in *Guardians of the Galaxy* and *Avengers: Age of*  
 4 *Ultron* without authorization. On information and belief, the contract provided for a financial  
 5 payment to DD3.

6           206. Defendant Disney MPG, acting either alone or through entities subject to its  
 7 supervision and control, contracted with DD3 to use the patented Contour facial motion capture  
 8 system and methods for facial motion capture in *Beauty and the Beast* without authorization. On  
 9 information and belief, the contract provided for a financial payment to DD3.

10          207. At all material times, defendant Disney MPG had the right and ability to supervise the  
 11 infringing conduct alleged herein, including but not limited to the infringing acts of defendants  
 12 Marvel and Mandeville and DD3, and had an obvious and direct financial interest in the exploitation  
 13 of Rearden Mova's patented works.

14          208. Each instance of DD3's unauthorized use of the Contour facial motion capture system  
 15 for facial motion capture in the *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and*  
 16 *the Beast* motion pictures in the performance of its contract with Disney MPG, or with entities  
 17 subject to Disney MPG's supervision and control, constitutes an act of direct infringement of one or  
 18 more claims of the '861 Patent.

19          209. At all material times, Disney MPG had actual knowledge of, or was willfully blind to,  
 20 the '861 Patent because it had performed an intellectual property due diligence with Rearden and  
 21 worked with Rearden to use the Contour facial motion capture system for facial motion capture in  
 22 *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter* (2012), and  
 23 *The Avengers* (2012). Based upon its intellectual property due diligence, Disney MPG had actual  
 24 knowledge that Rearden regarded the Contour facial motion capture system and methods to be  
 25 embodiments of the claims of the '861 Patent.

26          210. And on information and belief, Disney MPG had actual knowledge of, or was  
 27 willfully blind to, the '861 Patent because it had performed an intellectual property due diligence  
 28

1 with DD3 prior to contracting with DD3 to use the Contour facial motion capture system for facial  
 2 motion capture in *Guardians of the Galaxy* (2014), *Avengers: Age of Ultron* (2015), and *Beauty and*  
 3 *the Beast* (2017). A competent intellectual property due diligence would have included an  
 4 examination of the public record of assignments and/or attorney of record of the '861 Patent, which  
 5 would have revealed that DD3 did not have a license from any entity that could have owned the  
 6 Contour facial motion capture system.

7 165. And Disney MPG had actual knowledge of, or was willfully blind to, the '861 Patent  
 8 because Disney had been informed in an email from Pearce that the Contour assets included patents,  
 9 Disney entered negotiations to acquire the Contour assets, and on information and belief, performed  
 10 an intellectual property due diligence in connection with the acquisition to know what assets it would  
 11 be acquiring. Disney pulled out of the acquisition when it learned that LaSalle was unlawfully in  
 12 possession of them.

13 211. Disney MPG's actual knowledge of the '861 Patent, actual knowledge that Rearden  
 14 regarded the Contour facial motion capture system and methods to be embodiments of the claims of  
 15 the '861 Patent, and knowledge of or willful blindness to DD3's lack of authorization from any  
 16 entity that could have owned the Contour facial motion capture system, confirm Disney MPG's  
 17 specific intent to induce DD3 to infringe the '861 Patent by contracting with DD3 to use the Contour  
 18 facial motion capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers:*  
 19 *Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization.

20 212. Consequently, Disney MPG actively induced each instance of DD3's use of the  
 21 Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*,  
 22 *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization in the  
 23 performance of its contract with Disney MPG, or with entities subject to Disney MPG's supervision  
 24 and control. Disney MPG's active inducement of direct infringement by DD3 constitutes acts of  
 25 infringement of the '861 Patent under 35 U.S.C. § 271(b).

26 213. On information and belief, to the extent that Disney MPG, either directly or through  
 27 entities subject to its direction and control such as DD3, practiced any methods claimed in the '861  
 28

1 patent outside the United States, Disney MPG, either directly or through entities subject to its  
 2 direction and control such as DD3, imported the product of such methods, *i.e.*, Contour output  
 3 works, without material change and without combination with any other product, into the United  
 4 States constituting direct or actively induced infringement under 35 U.S.C. § 271(g).

5 ***Liability***

6 214. Defendant Disney MPG is liable to Plaintiffs for damages adequate to compensate for  
 7 Disney MPG's direct and actively-induced infringements, in an amount to be proved at trial but in no  
 8 event less than a reasonable royalty for the use made of Plaintiffs' invention by Disney MPG under  
 9 35 U.S.C. § 284.

10 215. In addition, defendant Disney MPG's direct and actively-induced infringements have  
 11 caused Plaintiffs irreparable harm that is not compensable by monetary damages, and therefore  
 12 Plaintiffs are entitled to injunctive relief under 35 U.S.C. § 283.

13 216. Disney MPG's direct and actively-induced infringements constitute willful, egregious  
 14 misconduct, and consequently Plaintiffs are entitled to a discretionary increase of their damages  
 15 award up to three times the amount found or assessed, costs, and attorney's fees under 35 U.S.C. §  
 16 284.

17 217. Finally, based on the foregoing facts, Plaintiffs request that this Court declare this an  
 18 exceptional case, and award Plaintiffs their costs and attorney's fees under 35 U.S.C. § 285.

19 **FOURTH CAUSE OF ACTION:**  
 20 **DIRECT AND ACTIVELY-INDUCED INFRINGEMENT OF U.S. PATENT 7,567,293**  
 21 **(DEFENDANT DISNEY MPG)**

22 218. Plaintiffs reallege and incorporate each and every allegation contained in the  
 23 paragraphs above with the same force and effect as if they were fully set forth here.

24 219. Plaintiff Rearden Mova LLC is the owner by assignment of the U.S. Patent 7,567,293  
 25 (the '293 Patent), entitled "System and Method for Performing Motion Capture by Strobing a  
 Fluorescent Lamp," issued on July 28, 2009.

26 220. The '293 Patent teaches systems and methods for performing motion capture using  
 27 fluorescent lamps. For example, capturing motion by generating synchronization signals, strobing

1       fluorescent lamps in response to the synchronization signals to charge phosphor-based makeup or  
2       dye, and strobing camera shutters synchronously with the lamps or light source.

3           221. The Contour facial motion capture apparatus and methods, which were conceived and  
4       developed by Rearden, and taken, offered and used by DD3, are commercial embodiments of the  
5       systems and methods claimed in the '293 Patent.

6           222. By way of example, and not limitation, claim 1 of the '293 Patent recites the  
7       following limitations:

8                   A system comprising:

9                   a synchronization signal generator to generate one or more  
10                   synchronization signals;

11                   one or more fluorescent lamps configured to strobe on and off  
12                   responsive to a first one of the one or more synchronization signals,  
13                   the fluorescent lamps illuminating makeup, markers, paint or dye  
14                   applied to a subject for a motion capture session; and

15                   a first plurality of cameras having shutters strobed synchronously  
16                   with the strobing of the light source to capture sequences of images  
17                   of the makeup, markers, paint or dye as the subject moves or  
18                   changes facial expressions during a performance, wherein the  
19                   shutters are open when the light source is off and the shutters are  
20                   closed when the light source is on.

21           223. The Contour facial motion capture system includes a synchronization signal generator  
22       to generate synchronization signals.

23           224. The Contour facial motion capture system includes fluorescent lamps configured to  
24       strobe on and off responsive to the synchronization signals. The fluorescent lamps illuminate  
25       makeup, markers, paint or dye applied to the subject for a motion capture session.

26           225. The Contour facial motion capture system has cameras with shutters that are  
27       controlled by the Contour program. The shutters are strobed continuously with the strobing of the  
28       fluorescent lamps to capture sequences of images of the makeup, markers, paint or dye as the subject  
     moves or changes facial expressions during a performance.

1           226. The Contour computer program signals the cameras to open their shutters when the  
2 white fluorescent light source is off and close their shutters when the white fluorescent light source is  
3 on.

4           227. By way of example, and not limitation, claim 3 of the '293 Patent recites the  
5 following limitations:

6                   The system as in claim 1 wherein the subject is a performer and  
7                   wherein makeup, markers, paint or dye is applied in a random  
                 pattern to the performer's face.

8           228. The subjects, e.g., Dan Stevens and Josh Brolin, are performers and makeup was  
9 applied in a random pattern to their faces in defendant's use of the Contour system.

10           229. By way of example, and not limitation, claim 27 of the '293 Patent recites the  
11 following limitations:

12                   The system as in claim 1 wherein the makeup or dye includes  
13                   phosphor.

14           230. The makeup includes phosphor in defendants' use of the Contour system.

15           ***Disney MPG's Direct Infringement under 35 U.S.C. 271(a)***

16           231. Defendant Disney MPG, acting either alone or through entities subject to its  
17 supervision and control, became a customer of DD3 when it subscribed by contract with DD3 to  
18 receive facial performance motion capture services and output works using the Contour system and  
19 methods in its *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* films.

20           232. On information and belief, the contract between DD3 and Disney MPG, either  
21 directly or through entities subject to Disney MPG's supervision and control, was a "Facility Use and  
22 Services Agreement" in which DD3 authorized defendant and its employees, agents, subcontractors,  
23 and permittees "to use designated portions of the Playa Facility [DD3's studios] in connection with  
24 the Shoot, subject to supervision by any DD3 employees which DD3 may deem appropriate." It  
25 requires DD3 to provide designated services at the facility.

26           233. On information and belief, the contract grants Disney MPG, either directly or through  
27 entities subject to Disney MPG's supervision and control, the unrestricted right to cancel "any  
28

1 portion of the Services” provided by DD3, subject only to the duty to pay for costs and services  
 2 performed before cancellation.

3 234. Pursuant to its contract with Disney MPG, either directly or through entities subject to  
 4 Disney MPG’s supervision and control, DD3 provided facial performance motion capture services  
 5 and output works using the Contour system and methods to Disney MPG on-demand.

6 235. On information and belief, Disney MPG, either directly or through entities subject to  
 7 Disney MPG’s supervision and control, transmitted a request to DD3 to initiate and schedule each  
 8 facial performance capture session using the Contour system and methods.

9 236. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 10 entities subject to its supervision and control, supplied performers to provide facial performances for  
 11 capture by DD3 using the Contour system and methods.

12 237. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 13 entities subject to its supervision and control, supplied a director to control and direct the actions of  
 14 DD3 in providing facial performance capture using the Contour system and methods. Acting as  
 15 Disney MPG’s supervising agent, the director controlled and directed DD3’s use of the Contour  
 16 system and methods by starting and terminating each session, starting and stopping each take,  
 17 ordering DD3 to provide additional takes, and choosing “selects”, all using the Contour system and  
 18 methods to capture the performer’s facial performance.

19 238. After completion of each facial performance capture using the Contour system and  
 20 methods, Disney MPG, either directly or through entities subject to its supervision and control,  
 21 caused DD3 to use the Contour system and methods to process the captures into various output  
 22 works in performance of its facial performance capture contract. DD3 generated Contour output  
 23 works and made them available to Disney MPG, either directly or to entities subject to Disney  
 24 MPG’s supervision and control, subject to the terms of the facial performance capture contract.

25 239. Disney MPG’s on-demand operation of the Contour system and methods is a “use” of  
 26 the Contour system and methods under 35 U.S.C. § 271(a) because Disney MPG puts the Contour  
 27 system and methods as a whole into service, *i.e.*, controls the system by initiating and scheduling

1 each session, providing the performer to serve as subject, providing a director to supervise and  
 2 control DD3's provision of facial performance capture services using the Contour system and  
 3 methods, choosing "selects" for further Contour program processing, and contracting for output  
 4 works generated by DD3's operation of the Contour system and methods. But for the actions of  
 5 Disney MPG or entities subject to its supervision and control, the entire Contour system would never  
 6 have been put into service in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the*  
 7 *Beast*.

8 240. Disney MPG obtained benefit from DD3's operation of the Contour system and  
 9 methods because it received Contour program output works that it used to animate CG characters  
 10 that appeared in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*, and  
 11 whose appearance was more realistic and compelling than was possible using the output of other  
 12 performance capture technologies.

13 241. Therefore, Disney MPG directly infringed the '293 patent by using the claimed  
 14 systems and methods without authorization.

15 ***Disney MPG's Active Inducement of DD3's Direct Infringement Under 35 U.S.C. § 271(b)***

16 242. At all material times, defendant Disney MPG had the right and ability to supervise the  
 17 infringing conduct alleged herein, including but not limited to the infringing acts of defendants  
 18 Marvel and Mandeville, and had an obvious and direct financial interest in the exploitation of  
 19 Rearden's patented works.

20 243. Defendant Disney MPG, acting either alone or through entities subject to its  
 21 supervision and control, contracted with DD3 to use the patented Contour facial motion capture  
 22 system and methods for facial motion capture in *Guardians of the Galaxy* and *Avengers: Age of*  
 23 *Ultron* without authorization. On information and belief, the contract provided for a financial  
 24 payment to DD3.

25 244. Defendant Disney MPG, acting either alone or through entities subject to its  
 26 supervision and control, contracted with DD3 to use the patented Contour facial motion capture

1 system and methods for facial motion capture in *Beauty and the Beast* without authorization. On  
 2 information and belief, the contract provided for a financial payment to DD3.

3 245. Each instance of DD3's unauthorized use of the Contour facial motion capture system  
 4 for facial motion capture in the *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and*  
 5 *the Beast* motion pictures in the performance of its contract with Disney MPG, or with entities  
 6 subject to Disney MPG's supervision and control, constitutes an act of direct infringement of one or  
 7 more claims of the '293 Patent.

8 246. At all material times, Disney MPG had actual knowledge of, or was willfully blind to,  
 9 the '293 Patent because it had performed an intellectual property due diligence with Rearden and  
 10 worked with Rearden to use the Contour facial motion capture system for facial motion capture in  
 11 *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter* (2012), and  
 12 *The Avengers* (2012). Based upon its intellectual property due diligence, Disney MPG had actual  
 13 knowledge that Rearden regarded the Contour facial motion capture system and methods to be  
 14 embodiments of the claims of the '293 Patent.

15 247. And on information and belief, Disney MPG had actual knowledge of, or was  
 16 willfully blind to, the '293 Patent because it had performed an intellectual property due diligence  
 17 with DD3 prior to contracting with DD3 to use the Contour facial motion capture system for facial  
 18 motion capture in *Guardians of the Galaxy* (2014), *Avengers: Age of Ultron* (2015), and *Beauty and*  
 19 *the Beast* (2017). A competent intellectual property due diligence would have included an  
 20 examination of the public record of assignments of the '293 Patent, which would have revealed that  
 21 DD3 did not have authorization from any entity that could have owned the Contour facial motion  
 22 capture system.

23 186. And Disney MPG had actual knowledge of, or was willfully blind to, the '293 Patent  
 24 because Disney had been informed in an email from Pearce that the Contour assets included patents,  
 25 Disney entered negotiations to acquire the Contour assets, and on information and belief, performed  
 26 an intellectual property due diligence in connection with the acquisition to know what assets it would

1 be acquiring. Disney pulled out of the acquisition when it learned that LaSalle was unlawfully in  
 2 possession of the Contour assets.

3 248. Disney MPG's actual knowledge of the '293 Patent, actual knowledge that Rearden  
 4 regarded the Contour facial motion capture system and methods to be embodiments of the claims of  
 5 the '293 Patent, and knowledge of or willful blindness to DD3's lack of a license from any entity that  
 6 could have owned the Contour facial motion capture system, confirm Disney MPG's specific intent  
 7 to induce DD3 to infringe the '293 Patent by contracting with DD3 to use the Contour facial motion  
 8 capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers: Age of Ultron*,  
 9 and *Beauty and the Beast* motion pictures without authorization.

10 249. Consequently, Disney MPG actively induced each instance of DD3's use of the  
 11 Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*,  
 12 *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization in the  
 13 performance of its contract with Disney MPG, or with entities subject to Disney MPG's supervision  
 14 and control. Disney MPG's active inducement of direct infringement by DD3 constitutes acts of  
 15 infringement of the '293 Patent under 35 U.S.C. § 271(b).

16 250. On information and belief, to the extent that Disney MPG, either directly or through  
 17 entities subject to its direction and control such as DD3, practiced any methods claimed in the '293  
 18 patent outside the United States, Disney MPG, either directly or through entities subject to its  
 19 direction and control such as DD3, imported the product of such methods, *i.e.*, Contour output  
 20 works, without material change and without combination with any other product, into the United  
 21 States constituting direct or actively induced infringement under 35 U.S.C. § 271(g).

22 ***Liability***

23 251. Defendant Disney MPG is liable to Plaintiffs for damages adequate to compensate for  
 24 Disney MPG's direct and actively-induced infringements, in an amount to be proved at trial but in no  
 25 event less than a reasonable royalty for the use made of Plaintiffs' invention by Disney MPG under  
 26 35 U.S.C. § 284.

1           252. In addition, defendant Disney MPG's direct and actively-induced infringements have  
 2 caused Plaintiffs irreparable harm that is not compensable by monetary damages, and therefore  
 3 Plaintiffs are entitled to injunctive relief under 35 U.S.C. § 283.

4           253. Disney MPG's direct and actively-induced infringements constitute willful, egregious  
 5 misconduct, and consequently Plaintiffs are entitled to a discretionary increase of their damages  
 6 award up to three times the amount found or assessed, costs, and attorney's fees under 35 U.S.C. §  
 7 284.

8           254. Finally, based on the foregoing facts, Plaintiffs request that this Court declare this an  
 9 exceptional case, and award Plaintiffs their costs and attorney's fees under 35 U.S.C. § 285.

10           **FIFTH CAUSE OF ACTION:**  
 11           **DIRECT AND ACTIVELY-INDUCED INFRINGEMENT OF U.S. PATENT NO. 7,548,272**  
                  **(DEFENDANT DISNEY MPG)**

12           255. Plaintiffs reallege and incorporate each and every allegation contained in the  
 13 paragraphs above with the same force and effect as if they were fully set forth here.

14           256. Plaintiff Rearden Mova LLC is the owner by assignment of U.S. Patent No. 7,548,272  
 15 (the '272 Patent), entitled "System and Method for Performing Motion Capture Using Phosphor  
 16 Application Techniques," issued on June 16, 2009.

17           257. The '272 Patent teaches an improved apparatus and method for performing motion  
 18 capture using phosphor application techniques. For example, a method for mixing phosphor-based  
 19 makeup with a makeup base, applying the mixture on surface regions of a motion capture subject,  
 20 strobing light source on and off, and strobing camera shutters synchronously with the strobing light  
 21 source to perform motion capture.

22           258. The Contour facial motion capture apparatus and methods, which were conceived and  
 23 developed by Rearden, and taken, offered and used by DD3, are commercial embodiments of the  
 24 systems and methods claimed in the '272 Patent.

25           259. By way of example, and not limitation, claim 1 of the '272 Patent recites the  
 26 following limitations:

27                           A method for performing motion capture comprising:

1 mixing phosphor with makeup to create a phosphor-makeup  
2 mixture;

3 applying the phosphor-makeup mixture to surface regions of a  
4 motion capture subject;

5 strobing a light source on and off, the light source charging  
6 phosphor within the phosphor-makeup mixture when on; and

7 strobing the shutters of a first plurality of cameras synchronously  
8 with the strobing of the light source to capture sequences of images  
9 of the phosphor-makeup mixture as the subject moves or changes  
10 facial expressions during a performance, wherein the shutters are  
11 open when the light source is off and the shutters are closed when  
12 the light source is on.

13 260. The Contour facial motion capture method includes a step in which phosphor is mixed  
14 with makeup to create a phosphor-makeup mixture.

15 261. The Contour facial motion capture method includes a step in which the phosphor-  
16 makeup mixture is applied to surface regions of the motion capture subject.

17 262. The Contour facial motion capture technology includes a step in which a light source  
18 is strobed on and off, the light source charging phosphor within the phosphor-makeup mixture when  
19 on.

20 263. The Contour facial motion capture technology includes a step in which cameras with  
21 shutters are controlled by computers and the Contour program, which opens the shutters when the  
22 white light source is off which capture sequences of images of the phosphor-makeup mixture as the  
23 subject moves or changes facial expressions during a performance, and the shutters are closed when  
24 the white light source is on.

25 264. By way of example, and not limitation, claim 4 of the '272 Patent recites the  
26 following limitations:

27 The method as in claim 1 wherein the phosphor-makeup mixture is  
28 applied in a random pattern.

29 265. The phosphor-makeup mixture was applied in a random pattern in defendants' use of  
30 the Contour system.

31 ***Disney MPG's Direct Infringement under 35 U.S.C. 271(a)***

1           266. Defendant Disney MPG, acting either alone or through entities subject to its  
 2 supervision and control, became a customer of DD3 when it subscribed by contract with DD3 to  
 3 receive facial performance motion capture services and output works using the Contour system and  
 4 methods in its *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* films.

5           267. On information and belief, the contract between DD3 and Disney MPG, either  
 6 directly or through entities subject to Disney MPG's supervision and control, was a "Facility Use and  
 7 Services Agreement" in which DD3 authorized defendant and its employees, agents, subcontractors,  
 8 and permittees "to use designated portions of the Playa Facility [DD3's studios] in connection with  
 9 the Shoot, subject to supervision by any DD3 employees which DD3 may deem appropriate." It  
 10 requires DD3 to provide designated services at the facility.

11           268. On information and belief, the contract grants Disney MPG, either directly or through  
 12 entities subject to Disney MPG's supervision and control, the unrestricted right to cancel "any  
 13 portion of the Services" provided by DD3, subject only to the duty to pay for costs and services  
 14 performed before cancellation.

15           269. Pursuant to its contract with Disney MPG, either directly or through entities subject to  
 16 Disney MPG's supervision and control, DD3 provided facial performance motion capture services  
 17 and output works using the Contour system and methods to Disney MPG on-demand.

18           270. On information and belief, Disney MPG, either directly or through entities subject to  
 19 Disney MPG's supervision and control, transmitted a request to DD3 to initiate and schedule each  
 20 facial performance capture session using the Contour system and methods.

21           271. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 22 entities subject to its supervision and control, supplied performers to provide facial performances for  
 23 capture by DD3 using the Contour system and methods.

24           272. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 25 entities subject to its supervision and control, supplied a director to control and direct the actions of  
 26 DD3 in providing facial performance capture using the Contour system and methods. Acting as  
 27 Disney MPG's supervising agent, the director controlled and directed DD3's use of the Contour  
 28

1 system and methods by starting and terminating each session, starting and stopping each take,  
 2 ordering DD3 to provide additional takes, and choosing “selects”, all using the Contour system and  
 3 methods to capture the performer’s facial performance.

4 273. After completion of each facial performance capture using the Contour system and  
 5 methods, Disney MPG, either directly or through entities subject to its supervision and control,  
 6 caused DD3 to use the Contour system and methods to process the captures into various output  
 7 works in performance of its facial performance capture contract. DD3 generated Contour output  
 8 works and made them available to Disney MPG, either directly or to entities subject to Disney  
 9 MPG’s supervision and control, subject to the terms of the facial performance capture contract.

10 274. Disney MPG’s on-demand operation of the Contour system and methods is a “use” of  
 11 the Contour system and methods under 35 U.S.C. § 271(a) because Disney MPG puts the Contour  
 12 system and methods as a whole into service, *i.e.*, controls the system by initiating and scheduling  
 13 each session, providing the performer to serve as subject, providing a director to supervise and  
 14 control DD3’s provision of facial performance capture services using the Contour system and  
 15 methods, choosing “selects” for further Contour program processing, and contracting for output  
 16 works generated by DD3’s operation of the Contour system and methods. But for the actions of  
 17 Disney MPG or entities subject to its supervision and control, the entire Contour system would never  
 18 have been put into service in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the*  
 19 *Beast*.

20 275. Disney MPG obtained benefit from DD3’s operation of the Contour system and  
 21 methods because it received Contour program output works that it used to animate CG characters  
 22 that appeared in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*, and  
 23 whose appearance was more realistic and compelling than was possible using the output of other  
 24 performance capture technologies.

25 276. Therefore, Disney MPG directly infringed the ‘272 patent by using the claimed  
 26 systems and methods without authorization.

***Disney MPG's Active Inducement of DD3's Direct Infringement Under 35 U.S.C. § 271(b)***

277. At all material times, defendant Disney MPG had the right and ability to supervise the infringing conduct alleged herein, including but not limited to the infringing acts of defendants Marvel and Mandeville, and had an obvious and direct financial interest in the exploitation of Rearden's patented works.

278. Defendant Disney MPG, acting either alone or through entities subject to its supervision and control, contracted with DD3 to use the patented Contour facial motion capture system and methods for facial motion capture in *Guardians of the Galaxy* and *Avengers: Age of Ultron* without authorization. On information and belief, the contract provided for a financial payment to DD3.

279. Defendant Disney MPG, acting either alone or through entities subject to its supervision and control, contracted with DD3 to use the patented Contour facial motion capture system and methods for facial motion capture in *Beauty and the Beast* without authorization. On information and belief, the contract provided for a financial payment to DD3.

280. Each instance of DD3's unauthorized use of the Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures in the performance of its contract with Disney MPG, or with entities subject to Disney MPG's supervision and control, constitutes an act of direct infringement of one or more claims of the '272 Patent.

281. At all material times, Disney MPG had actual knowledge of, or was willfully blind to, the '272 Patent because it had performed an intellectual property due diligence with Rearden and worked with Rearden to use the Contour facial motion capture system for facial motion capture in *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter* (2012), and *The Avengers* (2012). Based upon its intellectual property due diligence, Disney MPG had actual knowledge that Rearden regarded the Contour facial motion capture system and methods to be embodiments of the claims of the '272 Patent.

1           282. And on information and belief, Disney MPG had actual knowledge of, or was  
 2 willfully blind to, the '272 Patent because it had performed an intellectual property due diligence  
 3 with DD3 prior to contracting with DD3 to use the Contour facial motion capture system for facial  
 4 motion capture in *Guardians of the Galaxy* (2014), *Avengers: Age of Ultron* (2015), and *Beauty and*  
 5 *the Beast* (2017). A competent intellectual property due diligence would have included an  
 6 examination of the public record of assignments of the '272 Patent, which would have revealed that  
 7 DD3 did not have a license from any entity that could have owned the Contour facial motion capture  
 8 system.

9           283. And Disney MPG had actual knowledge of, or was willfully blind to, the '272 Patent  
 10 because Disney had been informed in an email from Pearce that the Contour assets included patents,  
 11 Disney entered negotiations to acquire the Contour assets, and on information and belief, performed  
 12 an intellectual property due diligence in connection with the acquisition to know what assets it would  
 13 be acquiring. Disney pulled out of the acquisition when it learned that LaSalle was unlawfully in  
 14 possession of them.

15           284. Disney MPG's actual knowledge of the '272 Patent, actual knowledge that Rearden  
 16 regarded the Contour facial motion capture system and methods to be embodiments of the claims of  
 17 the '272 Patent, and knowledge of or willful blindness to DD3's lack of authorization from any  
 18 entity that could have owned the Contour facial motion capture system, confirm Disney MPG's  
 19 specific intent to induce DD3 to infringe the '272 Patent by contracting with DD3 to use the Contour  
 20 facial motion capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers:*  
 21 *Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization.

22           285. Consequently, Disney MPG actively induced each instance of DD3's use of the  
 23 Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*,  
 24 *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization in the  
 25 performance of its contract with Disney MPG. Disney MPG's active inducement of direct  
 26 infringement by DD3 constitutes acts of infringement of the '272 Patent under 35 U.S.C. § 271(b).

1           286. On information and belief, to the extent that Disney MPG, either directly or through  
 2 entities subject to its direction and control such as DD3, practiced any methods claimed in the '272  
 3 patent outside the United States, Disney MPG, either directly or through entities subject to its  
 4 direction and control such as DD3, imported the product of such methods, *i.e.*, Contour output  
 5 works, without material change and without combination with any other product, into the United  
 6 States constituting direct or actively induced infringement under 35 U.S.C. § 271(g).

7           ***Liability***

8           287. Defendant Disney MPG is liable to Plaintiffs for damages adequate to compensate for  
 9 Disney MPG's direct and actively-induced infringements, in an amount to be proved at trial but in no  
 10 event less than a reasonable royalty for the use made of Plaintiffs' invention by Disney MPG under  
 11 35 U.S.C. § 284.

12           288. In addition, defendant Disney MPG's direct and actively-induced infringements have  
 13 caused Plaintiffs irreparable harm that is not compensable by monetary damages, and Plaintiffs  
 14 therefore are entitled to injunctive relief under 35 U.S.C. § 283.

15           289. Disney MPG's direct and actively-induced infringements constitutes willful,  
 16 egregious misconduct, and consequently Plaintiffs are entitled to a discretionary increase of their  
 17 damages award up to three times the amount found or assessed, costs, and attorney's fees under 35  
 18 U.S.C. § 284.

19           290. Finally, based on the foregoing facts, Plaintiffs request that this Court declare this an  
 20 exceptional case, and award Plaintiffs their costs and attorney's fees under 35 U.S.C. § 285.

21           **SIXTH CAUSE OF ACTION:**  
 22           **DIRECT AND ACTIVELY-INDUCED INFRINGEMENT OF U.S. PATENT NO. 8,659,668**  
 23           **(DEFENDANT DISNEY MPG)**

24           291. Plaintiffs reallege and incorporate each and every allegation contained in the  
 25 paragraphs above with the same force and effect as if they were fully set forth here.

26           292. Plaintiff Rearden Mova LLC is the owner by assignment of U.S. Patent No. 8,659,668  
 27 (the '668 Patent), entitled "Apparatus and Method for Performing Motion Capture Using a Random  
 28 Pattern on Capture Surfaces," issued on February 25, 2014.

1           293. The '668 Patent claims methods for applying a random pattern to specified regions of  
 2 an object, tracking the movement of the random pattern, and generating motion data representing the  
 3 movement of the object.

4           294. The Contour facial motion capture apparatus and methods, which were conceived and  
 5 developed by Rearden, and taken, offered and used by DD3, are commercial embodiments of the  
 6 systems and methods claimed in the '668 Patent.

7           295. By way of example, and not limitation, claim 1 of the '668 Patent recites the  
 8 following limitations:

9           A method comprising:

10           applying a random pattern of material to specified regions of a  
 11 performer's face, body and/or clothing;

12           capturing sequences of images of the random pattern with a first  
 13 plurality of cameras as the performer moves and/or changes facial  
 14 expressions during a motion capture session;

15           correlating the random pattern across two or more images captured  
 16 from two or more different cameras to create a 3-dimensional surface  
 17 of the specified regions of the performer's face, body, and/or clothing;

18           generating motion data representing the movement of the 3-  
 19 dimensional surface across the sequence of images;

20           strobing a light source on and off, the light source charging the random  
 21 pattern when on; and

22           strobing the shutters of a first plurality of cameras synchronously with  
 23 the strobing of the light source to capture the sequences of images of  
 24 the random pattern ("glow frames") as the performer moves or changes  
 25 facial expressions during a performance, wherein the shutters of the  
 26 first plurality of cameras are open when the light source is off and the  
 27 shutters are closed when the light source is on.

28           296. The Contour facial motion capture method includes a step of applying a random  
 29 pattern of material, a phosphor-makeup mixture, to regions of a performer's face.

30           297. The Contour facial motion capture method includes a step of capturing sequences of  
 31 images of the random patterns with cameras as the subject moves and changes facial expressions.

1           298. The Contour facial motion capture method includes a step of processing by a  
2 computer programmed with the Contour computer program, to correlate the random pattern across  
3 images captured by cameras to create a 3-dimensional surface of the performer's face.

4           299. The Contour facial motion capture method includes a step of processing by a  
5 computer programmed with the Contour program to generate motion data representing movement of  
6 the three dimensional surface across the sequence of images.

7           300. The Contour facial motion capture method includes a step of strobing white  
8 fluorescent light sources on and off, where the white light sources charge the random pattern of  
9 phosphor in the phosphor-makeup mixture.

10          301. The Contour facial motion capture method includes a step of strobing the shutters of  
11 cameras controlled by the Contour computer program. The shutters are strobed synchronously with  
12 the strobing of the light source to capture sequences of images of the random pattern of phosphor in  
13 the phosphor-makeup mixture as the performer moves or changes facial expressions during a  
14 performance. The shutters are open when the white light source is off, and closed when the light  
15 source is on.

16          302. By way of example, and not limitation, claim 28 of the '668 Patent recites the  
17 following limitations:

18           The method as in claim 1 wherein applying the random pattern  
19           comprises:

20           spraying the random pattern of material on the performer's face,  
21           body, and/or clothing with an airbrush.

22          303. Applying the random pattern comprises spraying the random pattern of material on  
23 the performer's face, body, and/or clothing with an airbrush in defendants' use of the Contour  
24 system.

### *Disney MPG's Direct Infringement under 35 U.S.C. 271(a)*

304. Defendant Disney MPG, acting either alone or through entities subject to its supervision and control, became a customer of DD3 when it subscribed by contract with DD3 to receive facial performance motion capture services and output works using the Contour system and methods in its *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* films.

305. On information and belief, the contract between DD3 and Disney MPG, either directly or through entities subject to Disney MPG's supervision and control, was a "Facility Use and Services Agreement" in which DD3 authorized defendant and its employees, agents, subcontractors, and permittees "to use designated portions of the Playa Facility [DD3's studios] in connection with the Shoot, subject to supervision by any DD3 employees which DD3 may deem appropriate." It requires DD3 to provide designated services at the facility.

306. On information and belief, the contract grants Disney MPG, either directly or through entities subject to Disney MPG's supervision and control, the unrestricted right to cancel "any portion of the Services" provided by DD3, subject only to the duty to pay for costs and services performed before cancellation.

307. Pursuant to its contract with Disney MPG, either directly or through entities subject to Disney MPG's supervision and control, DD3 provided facial performance motion capture services and output works using the Contour system and methods to Disney MPG on-demand.

308. On information and belief, Disney MPG, either directly or through entities subject to Disney MPG's supervision and control, transmitted a request to DD3 to initiate and schedule each facial performance capture session using the Contour system and methods.

309. For each Disney MPG-initiated session, Disney MPG, either directly or through entities subject to its supervision and control, supplied performers to provide facial performances for capture by DD3 using the Contour system and methods.

310. For each Disney MPG-initiated session, Disney MPG, either directly or through entities subject to its supervision and control, supplied a director to control and direct the actions of DD3 in providing facial performance capture using the Contour system and methods. Acting as

1 Disney MPG's supervising agent, the director controlled and directed DD3's use of the Contour  
 2 system and methods by starting and terminating each session, starting and stopping each take,  
 3 ordering DD3 to provide additional takes, and choosing "selects", all using the Contour system and  
 4 methods to capture the performer's facial performance.

5 311. After completion of each facial performance capture using the Contour system and  
 6 methods, Disney MPG, either directly or through entities subject to its supervision and control,  
 7 caused DD3 to use the Contour system and methods to process the captures into various output  
 8 works in performance of its facial performance capture contract. DD3 generated Contour output  
 9 works and made them available to Disney MPG, either directly or to entities subject to Disney  
 10 MPG's supervision and control, subject to the terms of the facial performance capture contract.

11 312. Disney MPG's on-demand operation of the Contour system and methods is a "use" of  
 12 the Contour system and methods under 35 U.S.C. § 271(a) because Disney MPG puts the Contour  
 13 system and methods as a whole into service, *i.e.*, controls the system by initiating and scheduling  
 14 each session, providing the performer to serve as subject, providing a director to supervise and  
 15 control DD3's provision of facial performance capture services using the Contour system and  
 16 methods, choosing "selects" for further Contour program processing, and contracting for output  
 17 works generated by DD3's operation of the Contour system and methods. But for the actions of  
 18 Disney MPG or entities subject to its supervision and control, the entire Contour system would never  
 19 have been put into service in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the*  
 20 *Beast*.

21 313. Disney MPG obtained benefit from DD3's operation of the Contour system and  
 22 methods because it received Contour program output works that it used to animate CG characters  
 23 that appeared in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*, and  
 24 whose appearance was more realistic and compelling than was possible using the output of other  
 25 performance capture technologies.

26 314. Therefore, Disney MPG directly infringed the '668 patent by using the claimed  
 27 systems and methods without authorization.

## ***Disney MPG's Active Inducement of DD3's Direct Infringement Under 35 U.S.C. § 271(b)***

315. At all material times, defendant Disney MPG had the right and ability to supervise the infringing conduct alleged herein, including but not limited to the infringing acts of defendants Marvel and Mandeville, and had an obvious and direct financial interest in the exploitation of Rearden's patented works.

316. Defendant Disney MPG, acting either alone or through entities subject to its supervision and control, contracted with DD3 to use the patented Contour facial motion capture system and methods for facial motion capture in *Guardians of the Galaxy* and *Avengers: Age of Ultron* without authorization. On information and belief, the contract provided for a financial payment to DD3.

317. Defendant Disney MPG, acting either alone or through entities subject to its supervision and control, contracted with DD3 to use the patented Contour facial motion capture system and methods for facial motion capture in *Beauty and the Beast* without authorization. On information and belief, the contract provided for a financial payment to DD3.

318. Each instance of DD3's unauthorized use of the Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures in the performance of its contract with Disney MPG, or with entities subject to Disney MPG's supervision and control, constitutes an act of direct infringement of one or more claims of the '668 Patent.

319. At all material times, Disney MPG had actual knowledge of, or was willfully blind to, the '668 Patent because it had performed an intellectual property due diligence with Rearden and worked with Rearden to use the Contour facial motion capture system for facial motion capture in *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter* (2012), and *The Avengers* (2012). Based upon its intellectual property due diligence, Disney MPG had actual knowledge that Rearden regarded the Contour facial motion capture system and methods to be embodiments of the claims of the '668 Patent.

1           320. And on information and belief, Disney MPG had actual knowledge of, or was  
 2 willfully blind to, the '668 Patent because it had performed an intellectual property due diligence  
 3 with DD3 prior to contracting with DD3 to use the Contour facial motion capture system for facial  
 4 motion capture in *Guardians of the Galaxy* (2014), *Avengers: Age of Ultron* (2015), and *Beauty and*  
 5 *the Beast* (2017). A competent intellectual property due diligence would have included an  
 6 examination of the public record of assignments of the '668 Patent, which would have revealed that  
 7 DD3 did not have a license from any entity that could have owned the Contour facial motion capture  
 8 system.

9           321. And Disney MPG had actual knowledge of, or was willfully blind to, the '668 Patent  
 10 because Disney had been informed in an email from Pearce that the Contour assets included patents,  
 11 Disney entered negotiations to acquire the Contour assets, and on information and belief, performed  
 12 an intellectual property due diligence in connection with the acquisition, to know what assets it  
 13 would be acquiring. Disney pulled out of the acquisition when it learned that LaSalle was  
 14 unlawfully in possession of them.

15           322. Disney MPG's actual knowledge of the '668 Patent, actual knowledge that Rearden  
 16 regarded the Contour facial motion capture system and methods to be embodiments of the claims of  
 17 the '668 Patent, and knowledge of or willful blindness to DD3's lack of authorization from any  
 18 entity that could have owned the Contour facial motion capture system, confirm Disney MPG's  
 19 specific intent to induce DD3 to infringe the '668 Patent by contracting with DD3 to use the Contour  
 20 facial motion capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers:*  
 21 *Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization.

22           323. Consequently, Disney MPG actively induced each instance of DD3's use of the  
 23 Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*,  
 24 *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization in the  
 25 performance of its contract with Disney MPG, or with entities subject to Disney MPG's supervision  
 26 and control. Disney MPG's active inducement of direct infringement by DD3 constitutes acts of  
 27 infringement of the '668 Patent under 35 U.S.C. § 271(b).

1           324. On information and belief, to the extent that Disney MPG, either directly or through  
 2 entities subject to its direction and control such as DD3, practiced any methods claimed in the '668  
 3 patent outside the United States, Disney MPG, either directly or through entities subject to its  
 4 direction and control such as DD3, imported the product of such methods, *i.e.*, Contour output  
 5 works, without material change and without combination with any other product, into the United  
 6 States constituting direct or actively induced infringement under 35 U.S.C. § 271(g).

7           ***Liability***

8           325. Defendant Disney MPG is liable to Plaintiffs for damages adequate to compensate for  
 9 Disney MPG's direct and actively-induced infringements, in an amount to be proved at trial but in no  
 10 event less than a reasonable royalty for the use made of Plaintiffs' invention by Disney MPG under  
 11 35 U.S.C. § 284.

12           326. In addition, defendant Disney MPG's direct and actively-induced infringements have  
 13 caused Plaintiffs irreparable harm that is not compensable by monetary damages, and therefore  
 14 Plaintiffs are entitled to injunctive relief under 35 U.S.C. § 283.

15           327. Disney MPG's direct and actively-induced infringements constitute willful, egregious  
 16 misconduct, and consequently Plaintiffs are entitled to a discretionary increase of their damages  
 17 award up to three times the amount found or assessed, costs, and attorney's fees under 35 U.S.C.  
 18 § 284.

19           328. Finally, based on the foregoing facts, Plaintiffs request that this Court declare this an  
 20 exceptional case, and award Plaintiffs their costs and attorney's fees under 35 U.S.C. § 285.

21           **SEVENTH CAUSE OF ACTION:**  
 22           **DIRECT AND ACTIVELY-INDUCED INFRINGEMENT OF U.S. PATENT NO. 8,207,963**  
                  **(DEFENDANT DISNEY MPG)**

23           329. Plaintiffs reallege and incorporate each and every allegation contained in the  
 24 paragraphs above with the same force and effect as if they were fully set forth here.

25           330. Plaintiff Rearden Mova LLC is the owner by assignment of U.S. Patent No. 8,207,963  
 26 (the '963 Patent), entitled "System and Method for Performance Motion Capture and Image  
 27 Reconstruction," issued on June 26, 2012.

1           331. The '963 Patent claims methods for establishing a reference frame and tracking many  
 2 vertices from frame to frame through the captured sequence.

3           332. The Contour facial motion capture apparatus and methods, which were conceived and  
 4 developed by Rearden, and taken, offered and used by DD3, are commercial embodiments of the  
 5 systems and methods claimed in the '963 Patent.

6           333. By way of example, and not limitation, claim 1 of the '963 Patent recites the  
 7 following limitations:

8           1. A computer-implemented system for performing motion capture of a  
 9 subject comprising:

10           a plurality of cameras for capturing a sequence of image frames of the  
 11 subject over a period of time, each frame having a plurality of vertices  
 12 defining a captured surface of the subject;

13           a computing system for processing the sequence of image frames, the  
 14 computing system having a memory for storing program code and a  
 15 processor for processing the program code to perform the operations  
 16 of:

17           establishing a reference frame having one or more of the plurality of  
 18 vertices and specifying a location for each of the vertices;

19           performing frame-to-frame tracking to identify locations of vertices  
 20 within an N'th frame based on locations of vertices within an (N-1)'th  
 21 frame or an earlier frame;

22           performing reference-to-frame tracking to identify locations of vertices  
 23 within the N'th frame based on the locations of vertices in the reference  
 24 frame to counter potential drift between the frames;

25           storing the locations of vertices for use in subsequent reconstruction of  
 26 the motion of the subject; and performing the frame-to-frame and  
 27 reference-to-frame tracking again using a different set of parameters,  
 28 the parameters defining a search area for the vertices of each frame  
 wherein multiple correlation passes are performed with the different  
 sets of parameters;

29           and wherein for passes after the first, the search area is shrunk by using  
 30 an estimate of the position of a vertex based on the position of nearby  
 31 vertices that were successfully tracked in the previous passes.

32           334. The Contour facial motion capture method includes a step of using a plurality of  
 33 cameras for capturing a sequence of image frames of the subject over a period of time, each frame  
 34 having a plurality of vertices defining a captured surface of the subject.

1           335. The Contour facial motion capture method includes a step of using a computing  
2 system for processing the sequence of image frames, the computing system having a memory for  
3 storing program code and a processor for processing the program code to perform the operations of:

- 4           (a) establishing a reference frame having one or more of the plurality of vertices  
5 and specifying a location for each of the vertices;
- 6           (b) performing frame-to-frame tracking to identify locations of vertices within an  
7 N'th frame based on locations of vertices within an (N-1)'th frame or an  
earlier frame;
- 8           (c) performing reference-to-frame tracking to identify locations of vertices within  
9 the N'th frame based on the locations of vertices in the reference frame to  
counter potential drift between the frames;
- 10           (d) storing the locations of vertices for use in subsequent reconstruction of the  
11 motion of the subject; and performing the frame-to-frame and reference-to-  
frame tracking again using a different set of parameters, the parameters  
defining a search area for the vertices of each frame wherein multiple  
correlation passes are performed with the different sets of parameters; and
- 12           (e) wherein the search area is shrunk by using an estimate of the position of a  
13 vertex based on the position of nearby vertices that were successfully tracked  
in the previous passes.

14           336. By way of example, and not limitation, claim 11 of the '963 Patent recites the  
15 following limitations:

16           The system as in claim 1 wherein the subject is a performer and  
17 wherein a random pattern of material is applied to regions of the  
18 performer's face to create the vertices to be tracked.

19           337. The subject is a performer and a random pattern of material is applied to regions of  
20 the performer's face to create the vertices to be tracked in defendants' use of the Contour system.

21           338. By way of example, and not limitation, claim 23 of the '963 Patent recites the  
22 following limitations:

23           The system as in claim 11 wherein applying the random pattern  
24 comprises:

25           spraying the random pattern on the performer's face with an  
26 airbrush.

1           339. Applying the random pattern comprises spraying the random pattern on the  
 2 performer's face with an airbrush in defendants' use of the Contour system.

3           ***Disney MPG's Direct Infringement under 35 U.S.C. 271(a)***

4           340. Defendant Disney MPG, acting either alone or through entities subject to its  
 5 supervision and control, became a customer of DD3 when it subscribed by contract with DD3 to  
 6 receive facial performance motion capture services and output works using the Contour system and  
 7 methods in its *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* films.

8           341. On information and belief, the contract between DD3 and Disney MPG, either  
 9 directly or through entities subject to Disney MPG's supervision and control, was a "Facility Use and  
 10 Services Agreement" in which DD3 authorized defendant and its employees, agents, subcontractors,  
 11 and permittees "to use designated portions of the Playa Facility [DD3's studios] in connection with  
 12 the Shoot, subject to supervision by any DD3 employees which DD3 may deem appropriate." It  
 13 requires DD3 to provide designated services at the facility.

14           342. On information and belief, the contract grants Disney MPG, either directly or through  
 15 entities subject to Disney MPG's supervision and control, the unrestricted right to cancel "any  
 16 portion of the Services" provided by DD3, subject only to the duty to pay for costs and services  
 17 performed before cancellation.

18           343. Pursuant to its contract with Disney MPG, either directly or through entities subject to  
 19 Disney MPG's supervision and control, DD3 provided facial performance motion capture services  
 20 and output works using the Contour system and methods to Disney MPG on-demand.

21           344. On information and belief, Disney MPG, either directly or through entities subject to  
 22 Disney MPG's supervision and control, transmitted a request to DD3 to initiate and schedule each  
 23 facial performance capture session using the Contour system and methods.

24           345. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 25 entities subject to its supervision and control, supplied performers to provide facial performances for  
 26 capture by DD3 using the Contour system and methods.

1           346. For each Disney MPG-initiated session, Disney MPG, either directly or through  
 2 entities subject to its supervision and control, supplied a director to control and direct the actions of  
 3 DD3 in providing facial performance capture using the Contour system and methods. Acting as  
 4 Disney MPG's supervising agent, the director controlled and directed DD3's use of the Contour  
 5 system and methods by starting and terminating each session, starting and stopping each take,  
 6 ordering DD3 to provide additional takes, and choosing "selects", all using the Contour system and  
 7 methods to capture the performer's facial performance.

8           347. After completion of each facial performance capture using the Contour system and  
 9 methods, Disney MPG, either directly or through entities subject to its supervision and control,  
 10 caused DD3 to use the Contour system and methods to process the captures into various output  
 11 works in performance of its facial performance capture contract. DD3 generated Contour output  
 12 works and made them available to Disney MPG, either directly or to entities subject to Disney  
 13 MPG's supervision and control, subject to the terms of the facial performance capture contract.

14           348. Disney MPG's on-demand operation of the Contour system and methods is a "use" of  
 15 the Contour system and methods under 35 U.S.C. § 271(a) because Disney MPG puts the Contour  
 16 system and methods as a whole into service, *i.e.*, controls the system by initiating and scheduling  
 17 each session, providing the performer to serve as subject, providing a director to supervise and  
 18 control DD3's provision of facial performance capture services using the Contour system and  
 19 methods, and contracting for output works generated by DD3's operation of the Contour system and  
 20 methods. But for the actions of Disney MPG or entities subject to its supervision and control, the  
 21 entire Contour system would never have been put into service in *Guardians of the Galaxy*, *Avengers:*  
 22 *Age of Ultron*, and *Beauty and the Beast*.

23           349. Disney MPG obtained benefit from DD3's operation of the Contour system and  
 24 methods because it received Contour program output works that it used to animate CG characters  
 25 that appeared in *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast*, and  
 26 whose appearance was more realistic and compelling than was possible using the output of other  
 27 performance capture technologies.

1           350. Therefore, Disney MPG directly infringed the '963 patent by using the claimed  
 2 systems and methods without authorization.

3           ***Disney MPG's Active Inducement of DD3's Direct Infringement Under 35 U.S.C. § 271(b)***

4           351. At all material times, defendant Disney MPG had the right and ability to supervise the  
 5 infringing conduct alleged herein, including but not limited to the infringing acts of defendants  
 6 Marvel and Mandeville, and had an obvious and direct financial interest in the exploitation of  
 7 Rearden's patented works.

8           352. Defendant Disney MPG, acting either alone or through entities subject to its  
 9 supervision and control, contracted with DD3 to use the patented Contour facial motion capture  
 10 system and methods for facial motion capture in *Guardians of the Galaxy* and *Avengers: Age of*  
 11 *Ultron* without authorization. On information and belief, the contract provided for a financial  
 12 payment to DD3.

13           353. Defendant Disney MPG, acting either alone or through entities subject to its  
 14 supervision and control, contracted with DD3 to use the patented Contour facial motion capture  
 15 system and methods for facial motion capture in *Beauty and the Beast* without authorization. On  
 16 information and belief, the contract provided for a financial payment to DD3.

17           354. Each instance of DD3's unauthorized use of the Contour facial motion capture system  
 18 for facial motion capture in the *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and*  
 19 *the Beast* motion pictures in the performance of its contract with Disney MPG, or with entities  
 20 subject to Disney MPG's supervision and control, constitutes an act of direct infringement of one or  
 21 more claims of the '963 Patent.

22           355. At all material times, Disney MPG had actual knowledge of, or was willfully blind to,  
 23 the '963 Patent because it had performed an intellectual property due diligence with Rearden and  
 24 worked with Rearden to use the Contour facial motion capture system for facial motion capture in  
 25 *TRON: Legacy* (2010), *Pirates of the Caribbean: On Stranger Tides* (2011), *John Carter* (2012), and  
 26 *The Avengers* (2012). Based upon its intellectual property due diligence, Disney MPG had actual

1 knowledge that Rearden regarded the Contour facial motion capture system and methods to be  
 2 embodiments of the claims of the '963 Patent.

3 356. And on information and belief, Disney MPG had actual knowledge of, or was  
 4 willfully blind to, the '963 Patent because it had performed an intellectual property due diligence  
 5 with DD3 prior to contracting with DD3 to use the Contour facial motion capture system for facial  
 6 motion capture in *Guardians of the Galaxy* (2014), *Avengers: Age of Ultron* (2015), and *Beauty and*  
 7 *the Beast* (2017). A competent intellectual property due diligence would have included an  
 8 examination of the public record of assignments of the '963 Patent, which would have revealed that  
 9 DD3 did not have a license from any entity that could have owned the Contour facial motion capture  
 10 system.

11 249. And Disney MPG had actual knowledge of, or was willfully blind to, the '963 Patent  
 12 because Disney had been informed in an email from Pearce that the Contour assets included patents,  
 13 Disney entered negotiations to acquire the Contour assets, and on information and belief, performed  
 14 an intellectual property due diligence in connection with the acquisition, to know what assets it  
 15 would be acquiring. Disney pulled out of the acquisition when it learned that LaSalle was  
 16 unlawfully in possession of them.

17 357. Disney MPG's actual knowledge of the '963 Patent, actual knowledge that Rearden  
 18 regarded the Contour facial motion capture system and methods to be embodiments of the claims of  
 19 the '963 Patent, and knowledge of or willful blindness to DD3's lack of authorization from any  
 20 entity that could have owned the Contour facial motion capture system, confirm Disney MPG's  
 21 specific intent to induce DD3 to infringe the '963 Patent by contracting with DD3 to use the Contour  
 22 facial motion capture system for facial motion capture in the *Guardians of the Galaxy*, *Avengers:*  
 23 *Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization.

24 358. Consequently, Disney MPG actively induced each instance of DD3's use of the  
 25 Contour facial motion capture system for facial motion capture in the *Guardians of the Galaxy*,  
 26 *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures without authorization in the  
 27 performance of its contract with Disney MPG, or with entities subject to Disney MPG's supervision  
 28

1 and control. Disney MPG's active inducement of direct infringement by DD3 constitutes acts of  
 2 infringement of the '963 Patent under 35 U.S.C. § 271(b).

3 359. On information and belief, to the extent that Disney MPG, either directly or through  
 4 entities subject to its direction and control such as DD3, practiced any methods claimed in the '963  
 5 patent outside the United States, Disney MPG, either directly or through entities subject to its  
 6 direction and control such as DD3, imported the product of such methods, *i.e.*, Contour output  
 7 works, without material change and without combination with any other product, into the United  
 8 States constituting direct or actively induced infringement under 35 U.S.C. § 271(g).

9 ***Liability***

10 360. Defendant Disney MPG is liable to Plaintiffs for damages adequate to compensate for  
 11 Disney MPG's direct and actively-induced infringements, in an amount to be proved at trial but in no  
 12 event less than a reasonable royalty for the use made of Plaintiffs' invention by Disney MPG under  
 13 35 U.S.C. § 284.

14 361. In addition, defendant Disney MPG's direct and actively-induced infringements have  
 15 caused Plaintiffs irreparable harm that is not compensable by monetary damages, and therefore  
 16 Plaintiffs are entitled to injunctive relief under 35 U.S.C. § 283.

17 362. Disney MPG's direct and actively-induced infringements constitute willful, egregious  
 18 misconduct, and consequently Plaintiffs are entitled to a discretionary increase of their damages  
 19 award up to three times the amount found or assessed, costs, and attorney's fees under 35 U.S.C.  
 20 § 284.

21 363. Finally, based on the foregoing facts, Plaintiffs request that this Court declare this an  
 22 exceptional case, and award Plaintiffs their costs and attorney's fees under 35 U.S.C. § 285.

23 **EIGHTH CAUSE OF ACTION:**  
**TRADEMARK INFRINGEMENT**  
**(DEFENDANTS DISNEY COMPANY, DISNEY MPG, AND BUENA VISTA)**

24 364. Plaintiffs reallege and incorporate each and every allegation contained in the  
 25 paragraphs above with the same force and effect as if they were fully set forth here.

1           365. At all material times, plaintiff Rearden Mova was the owner of U.S. Registration No.  
 2 3,843,152 for the MOVA trademark.

3           366. MOVA is an arbitrary or at least fanciful mark that is inherently distinctive.

4           367. Since at least 2006, Rearden Mova and its predecessors in interest have used the  
 5 MOVA trademark in connection with the marketing, promotion, and sales of Contour facial  
 6 performance capture services and output works to the motion picture and videogame industry,  
 7 including major motion picture studios and VFX studios.

8           368. Through the marketing, promotion, and sales efforts of Rearden Mova and its  
 9 predecessors in interest from 2005 through the present, and through the widespread publicity of and  
 10 industry acclaim for the Contour facial performance capture technology and services offered by  
 11 Rearden, Rearden Mova's MOVA trademark has acquired secondary meaning indicating that  
 12 Rearden is the exclusive source of Contour facial performance capture technology and services.

13           369. At all material times, defendant Disney Company dominated and controlled  
 14 defendants Disney MPG and Buena Vista.

15           370. Without authorization, Disney MPG and Buena Vista used Rearden Mova's MOVA  
 16 trademark in commerce in the credits on their *Guardians of the Galaxy* film, stating that "Facial  
 17 motion capture services were provided by Mova, a division of Digital Domain," as shown below:



1           371. And in connection with commercial advertising and promotion of its *Beauty and the*  
 2 *Beast* film including press releases, press conferences, and other advertising and promotional  
 3 activities,” Disney MPG through its employees, contractors, and agents, used Rearden’s MOVA  
 4 service mark, including but not limited to a press conference where Dan Stevens, the actor portraying  
 5 Beast, states that the facial capture “was done separately using a technology called MOVA.”

6           372. Disney MPG and Buena Vista’s unauthorized use of Rearden Mova’s MOVA  
 7 trademark on the credits for their *Guardians of the Galaxy* film and in connection with commercial  
 8 advertising and promotion of its *Beauty and the Beast* film is a use of a word or term that is likely to  
 9 cause confusion, mistake or deception as to the affiliation, connection, or association of Disney with  
 10 Rearden, and/or as to the origin, sponsorship of approval of the facial motion capture services used in  
 11 the *Guardians of the Galaxy* and *Beauty and the Beast* films by Rearden because the MOVA  
 12 trademark is exclusively associated with Rearden and identifies the exclusive source of its Contour  
 13 facial motion capture services and output works.

14           373. Disney MPG and Buena Vista’s unauthorized use of Rearden Mova’s MOVA  
 15 trademark on the credits for their *Guardians of the Galaxy* film and in connection with commercial  
 16 advertising and promotion of its *Beauty and the Beast* film is a misleading description or  
 17 representation of fact that is likely to cause confusion, mistake or deception as to the affiliation,  
 18 connection, or association of Disney with Rearden, and/or as to the origin, sponsorship of approval  
 19 of the facial motion capture services used in the *Guardians of the Galaxy* and *Beauty and the Beast*  
 20 films by Rearden because the MOVA trademark is exclusively associated with Rearden and  
 21 identifies the exclusive source of its Contour facial motion capture services and output works.

22           374. Unauthorized use of Rearden Mova’s MOVA trademark by Disney MPG, acting  
 23 either directly or through entities subject to its supervision and control, including but not limited to  
 24 defendants Marvel and Mandeville, in commerce in connection with commercial advertising and  
 25 promotion of its *Guardians of the Galaxy* and *Beauty and the Beast* films, including press releases,  
 26 press conferences, and other advertising and promotional activities, constitutes a use of a word or

1 term and a misleading description or representation of fact that is likely to cause confusion, mistake  
2 or deception as to the characteristics and qualities of the facial motion capture services in the films  
3 because the MOVA trademark is exclusively associated with Rearden and identifies the exclusive  
4 source of its Contour facial motion capture services and output works.

5 375. Rearden Mova is, and is likely to continue to be, damaged by Disney MPG and Buena  
6 Vista's unauthorized use of its Rearden MOVA service mark.

7 376. Disney MPG and Buena Vista's unauthorized use of Rearden Mova's MOVA  
8 trademark in commerce was with actual knowledge or willful disregard of Rearden Mova's service  
9 mark, with intent to cause confusion, mistake or deception.

10 269. At all material times, defendant Disney dominated and controlled Disney MPG and  
11 Buena Vista.

12 377. Defendants Disney Company, Disney MPG, and Buena Vista are liable to Plaintiffs  
13 for each and every act of trademark infringement alleged herein.

14 378. Plaintiffs are entitled to an award of their actual damages, disgorgement of  
15 defendants' profits, and costs and attorney's fees.

16 379. Furthermore, Plaintiffs have suffered irreparable harm that is not compensable by  
17 monetary damages, and is therefore entitled to injunctive and other equitable relief.

#### 18 **PRAYER FOR RELIEF**

19 Wherefore, Plaintiffs request the following relief:

20 A. Enter preliminary and/or permanent injunctions pursuant to 15 U.S.C. § 1116  
21 prohibiting defendants from using any of Plaintiffs' trademarks, and prohibiting distribution of the  
22 *Guardians of the Galaxy* motion picture in any medium bearing any of Plaintiffs' trademarks without  
23 authorization of Plaintiffs.

24 B. Pursuant to 15 U.S.C. § 1118, order the impoundment and destruction of all copies of  
25 *Guardians of the Galaxy*, *Avengers: Age of Ultron*, and *Beauty and the Beast* motion pictures in any  
26 medium.

27 C. Award financial damages compensation as follows:

1. Pursuant to 17 U.S.C. § 504, award Plaintiffs (a) actual damages; and (b) any  
2 additional profits of defendants that are attributable to the copyright infringements alleged herein and  
3 are not taken into account in computing the actual damages.

2. Pursuant to 35 U.S.C. § 284, award Plaintiffs damages adequate to  
5 compensate for defendant Disney MPG's patent infringements, in an amount to be proved at trial but  
6 in no event less than a reasonable royalty.

3. Pursuant to 15 U.S.C. § 1117, award Plaintiffs (a) defendants' profits; (b) damages sustained by Plaintiffs in an amount to be proved at trial; and (c) the costs of this action.

9 D. Willful Infringement.

10 1. Pursuant to 35 U.S.C. § 284, enter a finding that defendant Disney MPG's  
11 patent infringements as alleged herein were willful, egregious misconduct, and order a discretionary  
12 increase of Plaintiffs' damages award up to three times the amount found or assessed, costs, and  
13 attorney's fees.

14 2. Pursuant to 15 U.S.C. § 1117, enter a finding that defendants' trademark  
15 infringements as alleged herein were willful, in reckless disregard, or in willful blindness to  
16 Plaintiffs' copyright and trademark rights, and order enhanced damages, costs, and attorney's fees.

17 E. Award Plaintiffs their costs and attorney's fees as follows:

18 1. Pursuant to 17 U.S.C. § 505, award full costs and a reasonable attorney's fee  
19 to Plaintiffs.

20 2. Pursuant to 35 U.S.C. § 285, enter a finding that Disney MPG's patent  
21 infringements as alleged herein, present an exceptional case, and award Plaintiffs their costs and  
22 attorney's fees with respect to their patent infringement claims.

23 3. Pursuant to 15 U.S.C. § 1117, enter a finding that Defendants' trademark  
24 infringements as alleged herein present an exceptional case, and award Plaintiffs their costs and  
25 attorney's fees with respect to their patent infringement claims.

26 F. Grant such other and further relief as the Court deems just and equitable.

1 **DEMAND FOR JURY TRIAL**

2 Pursuant to Fed. R. Civ. P. 38(b), plaintiff demands trial by jury of all issues so triable under  
3 the law.

4 DATED: March 6, 2018

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